MAY 19 1924

ESTABLISHED IN 1872

PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

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FIFTY-SECOND YEAR

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Vol. LXXVIII. No. 20 NEW YORK AND CHICAGO, MAY 15, 1924 { Per Annum, $4.00 { Single Copy, 10 Cents

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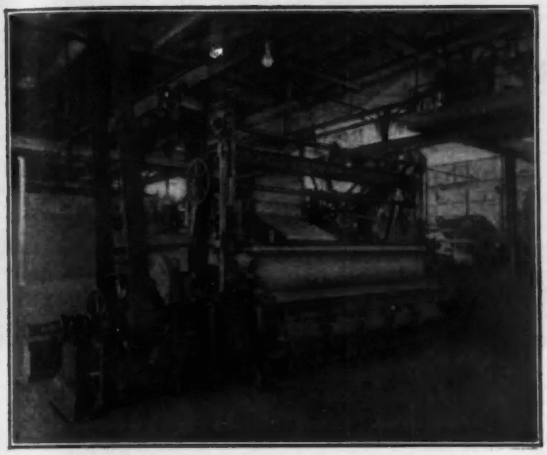

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PAPER TRADE JOURNAL
ESTABLISHED 1872
THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD
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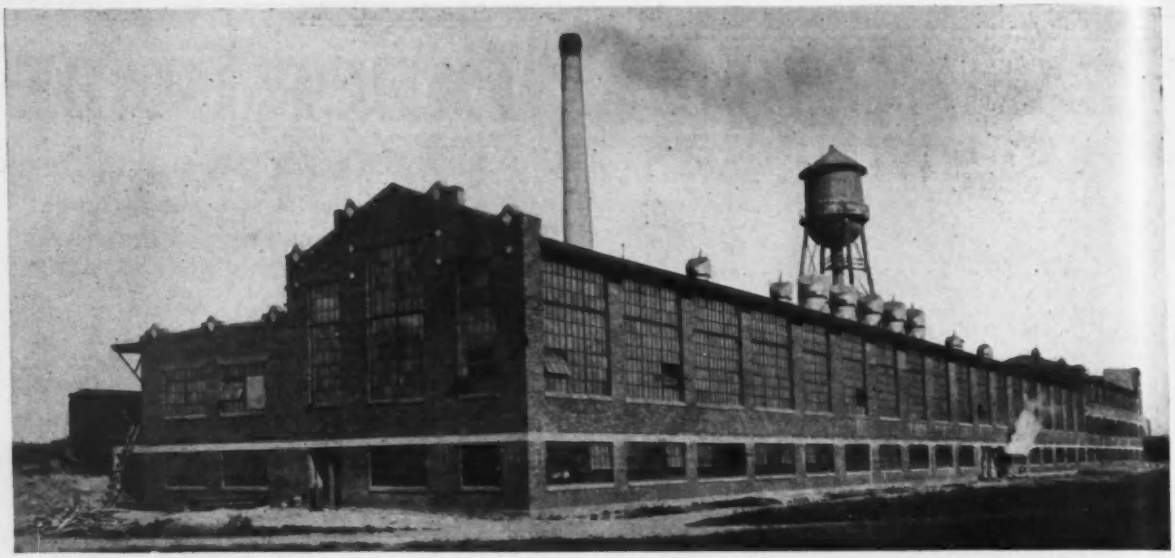

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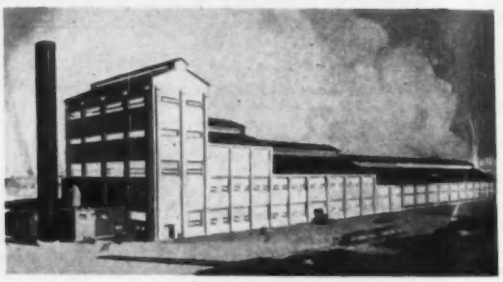
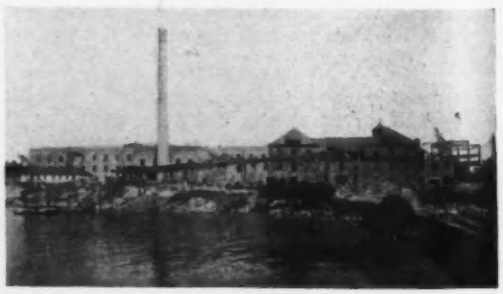


The Columbia River Paper Mill, Vancouver, Wash., designed and now under construction by The Austin Company.



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ESTABLISHED IN 1872

PAPER TRADE JOURNAL

Vol. LXXVIII No. 20 NEW YORK AND CHICAGO Thursday, May 15, 1924

PAPER PRODUCTION IN MARCH SHOWS 5 PER CENT. INCREASE

According to Statistics Collected by the American Paper and Pulp Association the News Print Service Bureau and Kindred Organizations, 66 News Print Mills Produced 119,098 Tons, 55 Book Mills Produced 82,824 Tons, 109 Paper Board Mills Produced 111,825 Tons, 87 Wrapping Mills Produced 50,002 Tons and 83 Fine Paper Mills Produced 25,974 Tons During March.

Production of paper by identical mills reporting to the American Paper and Pulp Association and co-operating organizations showed an increase of 5 per cent in March from the February production, according to the monthly statistical summary of the paper and pulp industry.

The tonnage summary is prepared by the American Paper and Pulp Association with the co-operation of the Binders' Board Manufacturers' Association, News Print Service Bureau, Tissue Paper Manufacturers' Association, Wrapping Paper Manufacturers' Service Bureau and Writing Paper Manufacturers' Asociation. The figures for March are as follows:

Grade	Number of Mills	Production Net Tons	Shipments Net Tons	Stocks on Hand End of Month Net Tons
News print	66	119,098	118,604	30,853
Book	55	82,824	83,592	32,511
Paperboard	109	111,825	113,042	31,940
Wrapping	87	50,002	49,490	56,016
Bag	26	9,828	9,678	5,805
Fine	83	25,974	26,153	38,465
Tissue	45	10,796	10,212	7,646
Hanging	9	4,504	4,193	2,756
Felts	20	14,208	14,462	1,989
Other grades	63	20,254	20,717	15,712
Total—all grades	..	449,313	450,143	223,693

The statistical table below gives the number of mills reporting to the American Paper and Pulp Association and the U. S. Pulp Producers' Association, and the data as to production of the various grades of pulp in March:

Grade	Number of Mills	Production Net Tons	Shipments Net Tons	Stocks on Hand End of Month Net Tons
Ground wood pulp	100	100,403	3,848	106,400
Sulphite, news grade	38	41,241	4,244	16,803
Sulphite, bleached	18	20,768	3,138	3,027
Sulphite, easy bleaching	4	4,349	451	1,203
Sulphite, Mitscherlich	6	5,973	721	1,399
Sulphate pulp	12	13,493	2,995	8,068
Soda pulp	11	14,921	4,751	2,100
Other than wood pulp	2	124	112	35
Total all grades	..	201,272	20,260	139,035

St. Regis Postpones Canadian Mill

MONTREAL, Que., May 12, 1924.—St. Regis Paper Company, which was planning to erect as initial unit a 200-ton news print mill at Cap Rouge, just above Quebec, has postponed the project indefinitely so that a surplus in news print production in this country will not be created. Price Brothers, whose plans called for 400 more tons daily by end of next year, are holding back also. The St. Regis Company's final program calls for mill of 400 tons daily capacity.

PAPER MEN ALIVE TO NEED OF MEETING IMPORT PROBLEM

American Paper and Pulp Association Discusses Plans and Decides to Ask Influential Paper Manufacturers to Meet With Executive Committee on Friday, May 16—Manner of Forming Import Committee Will Then Be Taken Up—Work Already Done On Problem Has Had Influence on Methods of Many of the Importers, It Is Said—Flagrant Offenders Showing New Caution.

The first quarterly meeting of the new executive committee of the American Paper and Pulp Association devoted much of its attention to plans for meeting the import problem, and after considerable discussion of the whole problem, it was agreed to ask a small group of the most influential paper manufacturers in the United States to meet with the Executive Committee Friday, May 16, to discuss the means of forming the import committee decided upon at the annual convention.

Change in Methods

The whole sentiment of the meeting was that the problem must be met aggressively and the violators of the customs laws be made to understand that paper bootlegging must stop.

Information reaching the American Paper and Pulp Association is that the work already done on this problem has caused a change in methods on the part of many of the importers. Recent shipments have confirmed the reports that some of the importers who have been flagrant offenders have in their recent shipments had the foreign paper consigned not to themselves, but to their customers, thus placing any risk that may attach to an effort to defraud the customs bureau upon the customer, and not upon themselves. In other words, the importers who are making this change in policy are ceasing their own violations of the law, but showing their customers how to evade the tariff, and shifting the burden of a change in the duty to the purchaser.

Fiber Composition of News Print

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., May 14, 1924.—A study of paper making fibers has been carried out recently by the paper section of the Bureau of Standards in connection with a determination of the fiber composition of news print paper.

Study is being made of the count method to find if more accurate results can be obtained than with the estimation method. The results indicate, it is said, that by using the count method and applying a factor based on the relative weights of the groundwood and sulphite fibers very accurate results may be obtained. Additional work will be required to determine the correct weight factor which should be used. In order to obtain information as to the accuracy of the methods of determining fiber composition in general use, samples of known composition have been submitted to different laboratories for test by the regular methods.

STOCK LISTING PLAN NOT SPONSORED FROM MONTREAL

Efforts to Secure Listing of Canadian Industrial Stocks on New York Exchange Not Favored by Officials of Companies—Developments in Liquidation Proceedings of Chicoutimi Co.—E. B. Eddy Co. Planning Million Dollar Plant Extensions—St. Regis Co. Postpones Erection of New Paper Mill—Port Alice Mills of Whalen Co. Expected to Resume Operations Soon.

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., May 12, 1924.—A despatch from New York, published in the papers here, states that preliminary negotiations have been opened looking toward the introduction of four leading Canadian industrial stocks on the New York security market. The four companies in question were stated to be Abitibi Power and Paper Company, Limited, Brompton Pulp and Paper Company, Limited, Spanish River Pulp and Paper Mills Company, Limited, and National Breweries. Those stocks are actively traded in on the Montreal Exchange.

Officials of several of the companies promptly denied any knowledge of such a move. It is known, moreover, that Montreal and Toronto interests are rather adverse to having Canadian listed issues also placed upon the New York Stock Exchange. They point out that the operation would be of little benefit to any. While it is admitted that there has developed a fairly large following in New York of a number of Canadian stocks, these are mostly traded in on an "unlisted" basis in New York, as well as directly on the Canadian markets through corresponding brokerage houses. So far as can be learned, no definite steps have been taken in the matter, and while the New York suggestions have been made upon several different occasions during the past year, it does not seem to be the inclination of Canadian company directors to place the securities of their companies upon outside stock markets, except when the need for such listing is demonstrated as constituting a direct service and advantage to a sufficiently large number of shareholders.

Chicoutimi and Saguenay Companies

A meeting of creditors of the Chicoutimi Pulp Company, Limited, in liquidation, held in Montreal, resulted in the appointment of J. E. Ardron, chief accountant of the bankrupt company, as trustee, and the appointment of Messrs. M. S. Guimont, K. C. E. Herberer, and A. M. Irvine as inspectors. During the meeting Senator F. L. Beique, president of the company, who represented creditors with claims amounting to more than $3,000,000, explained that the failure of the company was in part due to a loss of $1,500,000, sustained through the assignment of Becker & Co., London. The failure of the Bay Sulphite Company was given as another contributing cause. Senator Beique declared that in his opinion, the company could be reorganized on a sound and profitable basis by the issue of new bonds and common and preferred stock, so as to realize a sum of $1,000,000 to be utilized as working capital.

Sir Frederick Becker has addressed a letter to Saguenay Pulp and Power shareholders, in which he protests that neither he, the Ludgate Pulp Syndicate, the other English shareholders, or even Hall Caine, one of the directors, had been invited to attend the recent meeting of shareholders of the company held in Montreal. In this connection he stated the legality of that procedure would be tested.

Eddy Co. Plans Extensions

The E. B. Eddy Company, of Hull, is planning extensions costing $1,000,000 to their pulp, paper and lumber plants at Hull. The extensions are conditional on the Hull City Council agreeing to a commutation of taxes to the Eddy Company on an assessment of $4,000,000 for all its properties for a period of 10 years from May 1, 1922. The by-law is to be submitted as soon as possible, and if it carries, the Eddy Company is to undertake its new building program forthwith.

St. Regis Co. Postpones Canadian Mill

The St. Regis Paper Company has decided not to carry out its plans for the erection of a paper mill in Canada for the present. The company recently acquired a site near Quebec, and has extensive timber limits in the province. It will continue to ship its pulpwood out of Canada instead of manufacturing it into pulp and paper within the province. As soon, however, as conditions seem favorable and demand again becomes stronger than the available supply, a large sum will be spent in this country, probably at the site a short distance above Quebec, in the construction of complete units for groundwood pulp, sulphite pulp and news print manufacture.

Minister Defends Foreign Capital

Speaking of Quebec's resources in forest and hydraulic power before the Chambre de Commerce, in Montreal, Hon. Honore Mercier, minister of lands and forests, outlined legislation and regulations looking towards the perpetuation of forests, and the means that were being taken to develop water powers so that industrial centers might be extended and new ones created, and in that way create employment for the young men who left the farms, and now go to the United States for employment. The minister incidentally took occasion to refer to the fact that at times there is criticism of the leasing of forest areas to foreign capital, and emphasized that in a young province, such as Quebec, it could not be expected there would be sufficient wealth to otherwise enable the development of natural resources, hence foreign capital had been a necessity, and would be for some time to come, no matter where such capital might originate. Without foreign capital such developments as those on the St. Maurice river and on the Ottawa river, would not have come, and towns such as Shawinigan Falls, Grand 'Mere, La Tuque, Clark City, Jonquieres, etc., would not be in existence.

Thunder Bay Co. Doubling Its Pulp

Work will shortly be commenced on the plant of the Thunder Bay Paper Company at Current River in order to increase its capacity from 65 tons to 120 tons a day of groundwood pulp. It is expected that the mill will be operating by August. The power requirements will be increased from 4,000 to 6,500 h.p., and the employees from 110 to 160. The old plant was taken over in 1922 by the Thunder Bay Paper Company, and has been increased from 30 tons to 65 tons. It is said that as soon as timber limits have been secured a paper mill will be erected.

Whalen Co. May Resume

The Port Alice mills of the Whalen Pulp and Paper Company, Limited, which have been closed since the beginning of March, may be opened up again within the next few weeks. This plant, which shipped most of its pulp to Japan, found such a demoralization of the Oriental market consequent on the drop in the purchasing value of the yen, that it was decided to close for a month or two pending a stabilization of conditions there. Upwards of 350 employees were employed. The Mill Creek and Swanson Bay plants have been running continuously, and G. F. Gyles, deputy receiver for the company, states that it is expected the Port Alice organization may be in full operation again within possibly a month's time.

Canadian and Newfoundland Limits

Several Canadian and Newfoundland lumber and pulp propositions are being advertised in British trade journals as for sale, and a movement is on foot to secure British capital for the development of these kindred industries. Approach is being made direct to

British timber and newspaper interests. Among the properties for sale is one described as "the finest pulp proposition in the world." This consists of 4,294,116,000 feet b.m. situated in British Columbia, on water and rail, and it is advertised as "an ideal proposition for a group of newspaper or other interests to secure indefinite supplies." Another proposition offered to British interests comprises two "valuable and old-established lumber manufacturing concerns, under the same management, in British Columbia, separately or together. A third proposition is 521 square miles of pulpwood forests in Newfoundland, coveriing the greater part of the peninsula between White Bay and Green Bay on the northeast side of the island. The forests contain an average of 25 cords to the acre, of which 80 per cent is spruce. There are adequate streams for logging and ample power for all purposes, and a deep water port for large ocean steamships. The purchase price is $500,000 or £116,000. Another proposition emanates from the Laminated Wood Company, Limited, Skeena River, British Columbia, who are seeking to secure British capital for a plywood limit and plant. The cost of the plant is estimated at $195,000. The buildings and power equipment are designed for a double unit plant, each unit having a capacity of 100,000 square feet of plywood per day.

R. S. Kellogg Speaks in Cincinnati

CINCINNATI, Ohio, May 14, 1924.—"Every business man has the right to know all the essential facts in connection with the production and distribution of his product but he has neither moral nor legal right through agreement with his competitor to endeavor to bring about an artificial condition beneficial to himself and hurtful to the public," said R. S. Kellogg, secretary of the News Print Service Bureau in an address here today upon the subject of "Telling the Truth in Business" before the meeting of the National Coal Association.

"Monopolies and artificial restrictions upon commerce are illegal and abhorrent to us, because they run contrary to our sense of justice and our conception of freedom," continued Mr. Kellogg. But blind competition may be as disastrous as no competition in its ultimate effects. Intelligent competition is possible only when all the surrounding facts are known.

"Only upon a basis of facts is it possible for the public to be served in the manner it demands. Facts are sometimes disconcerting, but never so damaging as the gossip which circulates when facts are not available. Business done by daylight is permanently more successful than that done in darkness, and while the public may reap a temporary advantage from blind competition of either buyers or sellers, the public in the long run pays the bills for all economic losses."

The law of service, so well set forth by President Coolidge in addressing the Associated Press last month, was quoted in the words of the President as follows:

" 'Complete independence means complete co-ordination and co-operation. From this principle arises the oft-repeated law of service—we can help ourselves only as we help others. A knowledge and an understanding of others become absolutely necessary, in order to make our ideals practical. One of the pre-eminent requirements of our country at the present time is to reestablish and emphasize in the public mind this law of service.' "

Continuing Mr. Kellogg asserted that only through trade associations can the law of service be enforced in an industry, consisting of many widely scattered units. The outstanding accomplishments of American trade associations have been in two fields, first, the development of standards of commodities and practices; and second, in the compilation of facts—statistics. Statistics are as necessary to the navigator on the sea of business as are compass, sextant and barometer to the mariner on the high seas.

"Big business" usually has adequate means of its own for securing necessary data. It is only through trade associations that the smaller operators are able to be informed and meet conditions that arise from day to day.

"It is illegal for competitors by agreement to:

Fix prices
Limit output
Divide territory

"But commerce and industry assert that they have the inherent right to collect and distribute through their trade organizations statistics as to volume of production, shipments, stocks, orders, costs, wage rates and market conditions as to their own and competing commodities, all impartially compiled by a trained association executive and supplied without coloring by him to all who have a legitimate interest in the maters dealt with.

"Trade associations have opportunity for great service to their members and the public through the study of all items of cost and the setting-up of honest cost standards.

"The handling of cost data by trade associations should be on the same basis as other statistics which is: no guesswork; no advice as to selling prices or profit margins; no agreements as to fixed charges; no averaging or estimates to establish mythical 'costs' which in reality conceal a profit.

"Trade association service in cost determination should be of as high grade as that given by well-known firms of public accountants and equally impartial. Such service is of great value to an industry in: exposing incorrect methods; revealing uneconomic processes; checking wastes and indicating new opportunities for reducing costs.

"Direct service of this sort to an industry is indirect but nevertheless tangible service to the public which buys the product of the industry and will react to the benefit of the public."

No Dumping of Kraft From Canada

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., May 12, 1924.—The Customs Service of the Treasury Department has found that there is no dumping of kraft wrapping paper in the United States from Canada. In a letter on this subject to the Collector of Customs at Cleveland, Assistant Secretary of the Treasury Moss says:

"I refer again to the four dumping notices issued by the acting appraiser at Dayton under dates of May 29, June 9 and 16, 1923, covering Canadian kraft wrapping paper.

"It appears from evidence submitted by the importing companies that the purchases represented by these importations were isolated transactions, made necessary because the domestic concerns which had been supplying them had to refuse or reduce their orders as its production was not equal to the demand and that no such purchases have since been made.

"In these circumstances I cannot find that the domestic industry has been injured within the intent of the Anti-Dumping Act by these importations. Appraisement reports need no longer be withheld so far as any question of dumping is concerned."

Spruce Budworm Takes Big Toll in Maine

The Northeastern Forest Experiment Station, United States Department of Agriculture, plans to devote a good portion of its summer work to a thorough investigation of the spruce region in Maine, to determine the extent to which the attacks of he spruce budworm are killing second-growth timber or slowing down its rate of growth.

Samuel T. Dana, director of the station, found in a number of places examined that as high as seventy-five per cent of the trees in the stand had been killed outright. Where the trees are not actually killed by these insects the diameter growth of the tree is reduced to the extent of 75 to 80 per cent of the normal, and only in occasional instances following the attack is more than half the customary growth attained. White spruce, formerly supposed to be almost immune to budworm attack, has been found to suffer with the balsam and the red spruce.

In New Hampshire and southeastern Maine the budworm damage is comparatively light, if at all present.

PHILADELPHIA TRADE STILL RULED BY WAITING POLICY

Price Cutting on a More Extensive Scale Puts in Appearance in Fine Paper Division—Keystone Mills Not to Rebuild on Old Site—Clinton E. Woods Successful in Second Bid for Doty & Scrimgeour Plant—Board Mills Contemplating a Five Day Schedule—Employees of Thomas W. Price Co. to Hold Picnic on May 17—A. J. Blankerd Joins Lindsay Sales Force.

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., May 12, 1924.—A two-sider market is reported from the fine and coarse paper distribution in this territory, neither of them of a very promising nature as to immediate future prospects. On one hand there are distributors reporting that business in the past week has been more encouraging while others maintain that the market shows the same waiting policy which has been current for the past few weeks. The reawakened demand has been only for special industrial requirements that show seasonal activity such as the clothing, women's wear and other similar commercial lines that always bring a Springtime activity for the coarse paper markets and for the publishing trades in the fine paper division. There are a few scattered specialties too, which have been in fairly good demand such as wax papers for confectionery and grocery needs.

Price Concessions in Fine Papers

Price cutting has made its appearance on a more extensive scale in the fine paper division competition being keen among those houses of lesser prominence, although there have been some reduced offerings from the leading jobbers where bulk buying is concerned. Some of the houses featuring "sales" have large consignments of mill offerings in discontinued lines and clearings of fine papers and card boards and these are being pushed to great advantage at this time when the printing industry is practically at a standstill except for those plants catering to yearly contract work such as magazines, newspapers, and large advertising service. The text book publishing plants are also running to full capacity.

Competition in Coarse Papers

In the coarse paper division competition is equally as keen especially for Krafts. Foreign offerings have been most prominent from Central Europe and the land of the Norsemen where some attractive inducements coming particularly from Swedish manufacturers have been made for future deliveries. Present stocks of foreign Krafts have been fairly well cleaned up in this grade and the market is ripe for new business.

The stock market for out of town business is stagnant but local manufacturers are taking all the stock that can be accumulated because the prices are sufficiently low to induce buying. High grade paper stock is not accumulating in the warehouses as very little of this grade is procurable. Prices have been holding firm for all grades.

Keystone Mills Fire Damage $150,000

Following an explosion of a drum of fuel oil in the main building, the Keystone Paper Company's factory on Mill Road, near 69th street Terminal and two other buildings belonging to the company were entirely destroyed by fire a week ago and since then the estimate of loss has been placed at $150,000 by members of the firm. The fire completely wiped out the wax paper converting plant, destroying the waxing, finishing and storage sections in the group of buildings comprising the mill property and badly damaged the Kraft Mill where an 86-inch paper making machine producing 12 tons of Kraft daily was put out of commission the firm being obliged to suspend operation because of the running of its equipment. Vice-President Lindsay announced that no plans have been made as to resumption of operations but that it has been definitely decided that the company would not rebuild on the old site.

Close upon the destruction of the Keystone Mills there came during the week the announcement of the sale of the Lindsay Building at 804 Sansom street, when the property was conveyed to M. Weis who purchased it for the sum of $200,000. The Lindsay Building is a five-story structure on a plot 74 by 99 feet and is in the heart of the busy central city section. It has been used as a coarse and fine paper distribution center.

Second Sale of Doty & Scrimgeour Plant

In the second receiver's sale of the plant of the Doty Scrimgeour Company, of Reading, Pa., the property was conveyed to the purchaser in the previous contract, Clinton E. Woods of Philadelphia, the price having been placed at $53,000, an excess of $3,000 over the first sale. At the first sale, Mr. Woods bid $50,000 and the offer was accepted but, upon complaint of another bidder who claimed that he had offered a higher figure, the sale was cancelled by the presiding Judge in the Reading Courts and another date set for disposition of the property last week. In addition to the sale price of $53,000, Mr. Woods takes over the mortgage existing on the plant amounting to $15,000, bringing the total price to $18,000 over that of the former sale. In addition to the real estate the sale included all the personal property, machinery and supplies.

New Machine in MacAndrews & Forbes Plant

The newly installed machine, added to the equipment of the board manufacturing plant of the MacAndrews & Forbes Company, in Camden, N. J., just across the Delaware, shortly will be put into operation. It will enable the firm to increase production to 60 tons per day with a total of 150 tons.

Board Mills Plan New Time Schedule

Board mills in the Philadelphia territory have been approached with an especially urgent request on the part of a group of mill representatives for a five day week operation schedule to take place beginning in June and extending until early September. It is understood that with mills running under this time schedule all hands can be kept busy throughout the summer months in the plants and that there also will be provided an economy in operation expenses by the two day suspension from business. It is expected that the mills will get together on this proposition and that all will benefit in these days of slack orders. Several thousand employees will be affected by the new schedule.

A. J. Blankerd Joins Lindsay Brothers

A. J. Blankerd, well known in the Philadelphia and New York paper trade, has joined the sales organization of Lindsay Brothers, 804 Sansom street, and will represent the firm in both the fine and coarse paper divisions. He is a former associate of Wilkinson Brothers, which took over the old A. G. Elliott Company, where he was manager. Upon the sale of the Philadelphia branch of Wilkinson Bros. to the D. L. Ward Company, he went to New York, and for many years was connected with the Metropolitan headquarters of the Wilkinson business.

Picnic for Price Employees

A day in the outdoors is to be enjoyed by the employees of the Thomas W. Price Company, who comprise the membership of the Vici Athletic Club, the social organization of the fine paper house. On May 17, 35 employees will journey by auto to Snyder's Woods just beyond Fox Chase and there will join in a program of sports.

News Notes of the Trade

President John H. Sinex, of the Garrett-Buchanan Company, who has been confined to his home for several weeks with an attack of grippe, returned to his desk during the week.

John A. Murphy, head of the paper stock firm of Daniel I. Murphy, with offices in the Brown Building, left last week for a two weeks' trip through the New England Mills.

MATHIESON System

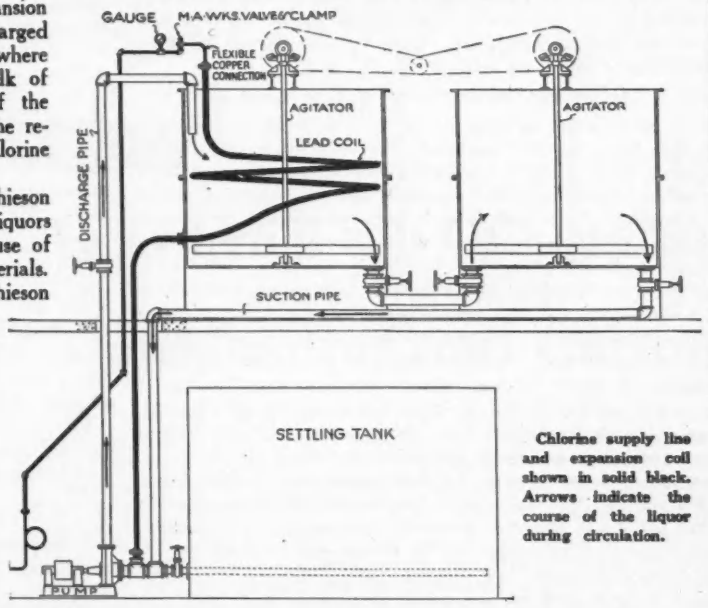
An Existing Bleach Plant

Readily Adapted to the Use of Liquid Chlorine

THE accompanying drawing illustrates how the existing bleach plant of the Crystal Tissue Company, Middletown, Ohio, was easily converted to the use of Liquid Chlorine by the Mathieson System. Necessary additional equipment consisted only of the chlorine connections and supply line and the lead expansion coil installed in one tank.

The two former bleach-mixing tanks now operate as a single unit, the combined capacity being sufficient to take the full contents of a ton container of Liquid Chlorine. The Liquid Chlorine enters the upper end of the lead coil through an expansion valve, vaporizes in the coil and is discharged as a gas into the suction of the pump, where it is absorbed by the circulating milk of lime solution. The temperature of the liquor is kept within safe limits by the refrigerative effect of the Liquid Chlorine vaporizing in the immersed coil.

The Batch Method of the Mathieson System produces uniform bleach liquors and avoids overchlorination by the use of predetermined quantities of all materials. The ton containers carried by the Mathieson Multi-Unit Tank Car are of exactly 2,000 pounds net weight and provide an absolutely accurate unit measure for each batch of bleach liquor.



Chlorine supply line and expansion coil shown in solid black. Arrows indicate the course of the liquor during circulation.

Let our Technical Department demonstrate how the many advantages of the Mathieson System can be realized in YOUR plant.

THE MATHIESON ALKALI WORKS, *Inc.*

25 WEST 43rd STREET — NEW YORK CITY

PHILADELPHIA — PROVIDENCE

CHICAGO — CHARLOTTE

Deal Direct with the Manufacturer

Bicarbonate of Soda
Liquid Chlorine-Caustic Soda
Sesquicarbonate of Soda
Bleaching Powder-Soda Ash

LESS BUYING PREVAILS NOW IN CHICAGO PAPER MARKET

Prices Are Holding Fairly Stable in Spite of Fact That a Lessened Demand Is Noted In Most Lines—Pilcher-Hamilton Active in Efforts to Stimulate Sales Force—La Salle Paper Co. Moved to 847-855 W. Adams Street—National Container Association to Meet at Drake Hotel, May 20-21—Designing and Testing Laboratory Now Located at 739 S. Clark Street.

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, Ill., May 12, 1924.—Less buying by paper consumers appears to be the prevailing condition of this market at present, according to merchants. The slight spurt of several weeks back was rather short-lived. As a matter of fact, book papers figured most prominently at that time and many inquiries developed into substantial orders. In the interval printers have eased up in their demands, principally because the immediate need seemed to have been met. Mills are said to be operating to capacity with orders booked ahead for several weeks.

Prices Fairly Stable

In the face of lessened demand, not only for book papers, but also on writings, bonds, coarse papers and boards, prices are holding fairly stable. On the upper grades there is no change mentioned. Wrapping papers have varied but little in the last three weeks, when some declines were noted. However, the demand for kraft and manilas is not at all satisfactory.

Board and Paper Stocks at Low Level

The board market continues in the doldrums. Prices are lower than they have been for some time. The only reason given is "no business." It is stated that mills are running only about 60 to 70 per cent of normal capacity. But there was some optimism voiced by a member of the trade who is quite prominent. He expects May and June to be rather quiet, with better activity during July.

Paper stocks are selling f. o. b. this city at figures below what they have been bringing for some period. With board mills taking but a small portion of the normal tonnage, dealers are required to spend efforts elsewhere to market their wares. Practically all grades of paper stock registered decreases in the past fortnight, including the higher grades. Mixed papers were selling for as low as $12 per ton, f. o. b. Chicago, last week, but only in some occasional large quantities. The condition, though, is expected to be only temporary and better conditions are looked for shortly.

Roofing stock has been on the down grade from its high figure of $43 per ton, for No. 1 grade. It has declined practically $10 in the last month and it is expected to go even lower. Roofing plants are out of the market for the present and inasmuch as this constitutes a large part of the consuming industry for roofing stock it is pretty hard hit.

Pilcher-Hamilton Spurs on Sales Force

The Pilcher-Hamilton Company, merchants of books and wrapping papers, takes great pride in the effective sales force that is responsible for its ever mounting sales volume. They are registering a substantial increase in business each month. And this is the result of the progressive methods employed by the officials, among whom is included E. A. Hall, Jr., sales manager. A sales luncheon is held once each month, usually on the first Thursday at the Union League Club. Various subjects of vital importance to the sales organization are taken up at this meeting. If, during that month a sales contest is to be staged on some certain kind of paper carried in stock, an expert from the manufacturer is entertained at the luncheon and afterwards, he gives a talk on that particular kind of paper to help the boys talk it more intelligently when selling customers. Then, to get this paper before the customers and prospective buyers, the house organ of the company, Bookan Wrap is printed that month on the kind of paper to be featured. This ties it up all around.

In the sales organization there is a sales committee composed of three salesmen and the sales manager that takes up subjects concerning the relation of the salesman to the company. If a salesman has a grievance, he takes it up through this committee and if the officials have a grievance, they take it up first with this committee which in turn deals with the individual.

There is another unique feature to this sales force. As a matter of fact, the salesmen also do the buying. That is, if a new line is considered, it is first presented to the salesmen. If they feel there is a need for it in the territory sufficiently to warrant their selling it, the line is added.

In line with the "Nixie" campaign which the United States Post Office has been waging throughout the country, the Pilcher-Hamilton Company has adopted a similar one which has met with the approval of the postmaster at Chicago and a letter to that effect was received at the company office from him. This will be propaganda to induce shippers to send out all packages wrapped more securely, and incidentally to use good paper in wrapping them.

La Salle Paper Co. in New Quarters

The La Salle Paper Company is now located in its new building which was just made ready for occupancy on May 1. The firm was previously located at 171-173 N. Dearborn street, this city. The new building is at 847-855 W. Adams street, at the corner of Peoria. This structure is one of the finest in the paper industry of this territory and while it is not so large as some of the huge warehouses in the country, is one that would delight many merchants of paper.

The building is 50 feet wide by 125 feet long and is constructed of reinforced concrete and red brick. It has a large basement in which is stationed the oil burning heating system, the last word in a plant of this kind. The basement can be safely used for any storage purpose for electrically driven pumps insure dryness at all times. The first floor contains the office in the front corner, and a display room just behind it on the Adams street side, where plenty of natural light will make possible the selection of papers from samples without the aid of artificial illumination. The balance of the floor will be utilized for paper storage, while the alley end is designed for the shipping room, with a high platform so that loading vehicles will be a speedy operation. The second floor is also a store room. This is unusually spacious and a vast quantity of paper can be kept there safe from a possible fire.

The building has been constructed sufficiently strong to hold two additional stories, which will probably be added as the need for them develops.

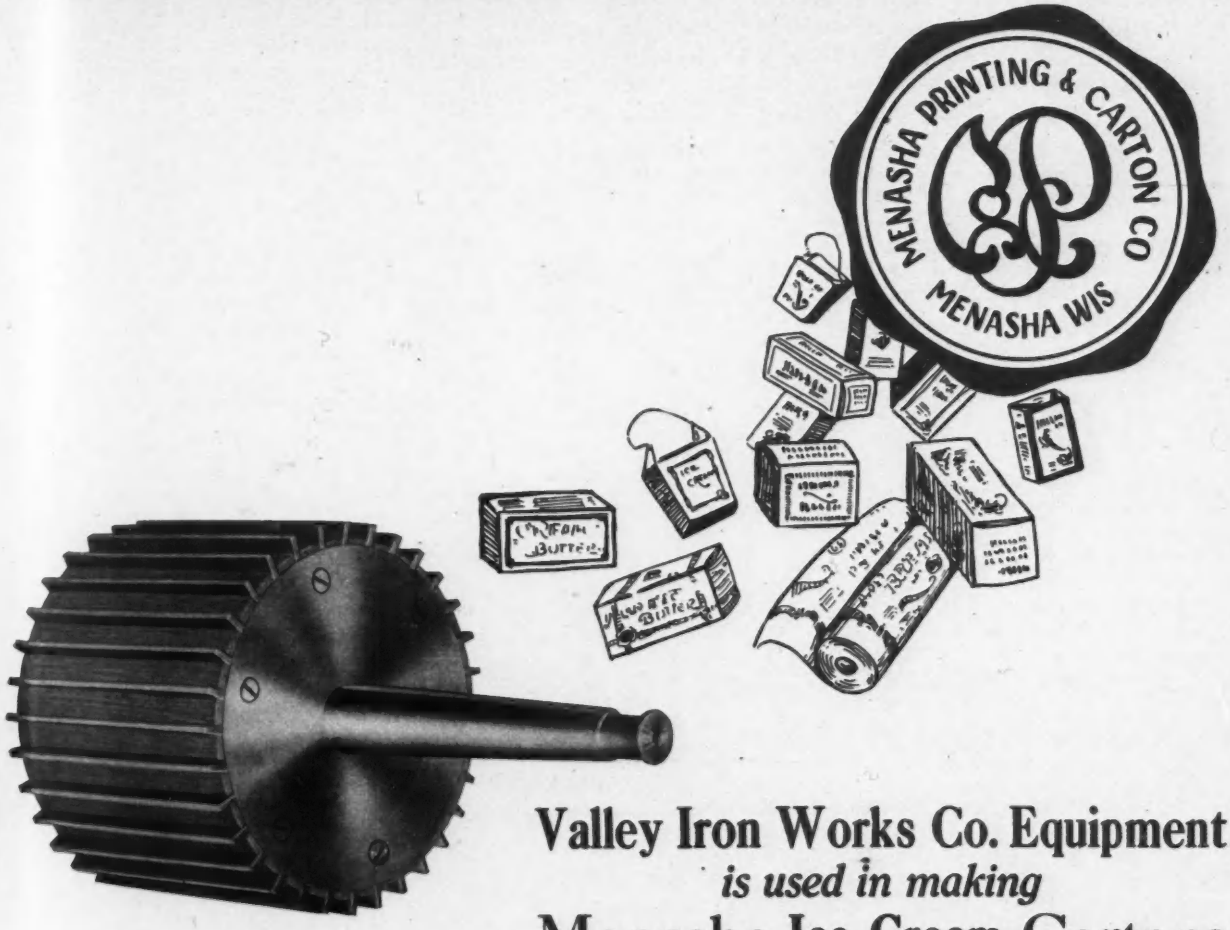
H. D. Keeler Special Representative

Announcement has just been made of the employment of H. D. Keeler, previously connected with the Paper Board Corporation, of Tonawanda, N. Y., in the capacity of special representative for field work in promoting the use of corrugated and solid fiber boxes in lines of industry not heretofore covered by the National Container Association. Mr. Keeler will work under the general direction of the association sales promotion committee, which consists of Chairman J. P. Brunt, J. J. Brossard, J. M. Connor, George W. Gair and Irving Hill.

Recent Trade Visitors

Several prominent paper men were in the Windy City last week, among them being A. S. Guggenheim, of the United Paper Manufacturers, of Springfield, Mass.; P. B. Wheeler, of the Franklyn Paper Company, Holyoke, Mass., and Constant Southworth, of the Hampshire Paper Company, and the Carew Paper Company, both of South Hadley, Mass.

FAMOUS PRODUCTS SERIES No. 22



Valley Iron Works Co. Equipment *is used in making* Menasha Ice Cream Cartons

Every time you take home a brick of ice cream, butter or oleo, you have just seventy chances out of one hundred of carrying also a carton made by the Menasha Printing & Carton Company. Just about that percent of the cartons used in America for these purposes are made in the two big Wisconsin plants of this well-known concern.

Not only do they design, print and manufacture the waxed cartons, but they also make the cardboard of which the cartons are constructed and Valley Iron Works Co. equipment helps make this cardboard. Niagara Beaters are included in the mill that produces this stock and are an important factor in the excellence of the product and its economical production.

Niagara Beaters and the Valley Bandless Roll

Producing better stock, with less power and at a much greater speed, Niagara Beaters are winning universal praise. An important factor in the efficiency of these engines is the Valley Bandless Roll, a feature of all beaters produced by the Valley Iron Works Co.

Valley Bandless Rolls may also be installed in other beaters. They are as far ahead of the average roll as a modern auto tire is ahead of the old style detachable rim tire. They are more accessible, safer, save time and are easier to handle. Write today for more information about them.

Valley Iron Works Co.

Plant:
APPLETON, WISCONSIN

New York Office
350 MADISON AVE.

LABOR AGREEMENT SIGNED BY ABITIBI PAPER COMPANY

Howard Smith Paper Co. Adds New Products to Its Line—Salesmen of Two Companies Hold Meeting at Hamilton—New Factory of Reid Bros. & Co. is Completed—J. D. McArthur & Co. to Build Large News Print Plant at Pine Falls—Mattagami Pulp and Paper Co. Operating at Capacity—Spanish River and Abitibi Paper Co. Merger Reports Persist—Charles W. Cox Gets Charter.

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Ontario, May 12, 1924.—The agreements between the Abitibi Power and Paper Company, Iroquois Falls, Ont., and the labor unions for the next year have been signed. The negotiations this year differed from those of former years in that the unions and the company dealt directly and not as in former years simply as members of groups. International officers of the various unions sat at the conference with the representatives. Both the men and the company feel satisfied with the agreement. The conferences were short and amicable. Representatives of the unions who were in conference with the management of the Abitibi Company are satisfied that direct dealing between the management of the mill and the employees is the best way to discuss and to settle conditions which will bind both parties for another year. Each has a knowledge of the situation and much useless delay is avoided.

One outstanding feature of the negotiations was the formation of a federated committee of the unions. The idea of this committee is to have a regular body of representatives who are in a position to discuss with the management question affecting all employees so that matters of general application do not need to be taken up with each union in turn. The committee is to work both ways. Questions affecting the whole force may be brought to the attention of the committee by the management or the attention of the management by the committee.

Turning Out Paper Specialties

The plants of the Howard Smith Paper Company, are operating to about 80 per cent capacity at the present time. In view of the considerable increase in capacity arising from the recent additions to the plant at Cornwall, Ont., this means a larger volume of output than ever before attained in the history of the company. Several new lines of products have lately been added to the already large list turned out. One of these is black album paper which has heretofore all been imported. Still another is a class of filter papers which are largely used in scientific processes and formerly had to be secured outside of Canada.

The Howard Smith Paper Mills Company was the pioneer in the manufacture of blotting paper in the Dominion on a large scale, only a small amount having been made in this country before. This has meant a big saving in imports.

Sales Staff Has Reunion

There was recently held in Hamilton, Ont., a meeting of the salesmen of the British Amereican Wax Paper Mills, Limited, and the Dominion Sales Book Company, of Hamilton. The Consolidated Sales Book and Wax Paper Company control these two firms and L. M. Appleford, the president, and other directors were on hand to welcome the guests. C. P. McGregor, who is the sales manager, congratulated the men on the business they had sent in, and expressed strong confidence that 1924 would prove a record one for both companies. Among the others who spoke were W. H. Ross, manager of the British American Wax Paper Company, and L. M. Appleford. The keynote of their addresses was co-operation between all branches of the firm in order to obtain the highest standard of service for customers.

It is some seventeen years ago that the British American Wax Paper Company's plant was established in Toronto. It began in a small way and today possesses one of the largest and best equipped manufacturing premises in the city.

The Dominion Sales Book Company is a comparatively young concern but old in experience as everyone connected with it has had insight in the sales book line. At the close of the convention the president and directors entertained the salesmen to a dinner and one of the features of the gathering was the presentation of a hat to William Durdeen, of Winnipeg, winner of the competition among the salesmen.

New London Factory Is Complete

Reid Brothers and Company, of London, Ont., whose large factory was burned down some months ago, have rebuilt and are now occupying their new premises which cover an area of 30,000 feet and are equipped with the most modern conveniences. All the machines are run by individual motors and safety devices are installed throughout the whole building. The company have many activities and manufacture paper bags, paper boxes, loose leaf sheets, etc., as well as do printing, book binding, etc. A wholesale business is also conducted in paper of various lines, twines, paper bags, etc.

Veteran Paper Man to Visit Canada

S. L. Dixon of L. S. Dixon & Co., who are well-known paper manufacturers in Liverpool and London, England, is expected in Canada in the near future to study pulp and paper conditions. Mr. Dixon is now in his eighty-fourth year and still keeps closely in touch with trade conditions throughout the Empire. L. S. Dixon & Co., are the sole representatives in England for a number of bond paper lines put up by the Howard Smith Paper Mills, Limited, Montreal.

The Glengarry Pulp Company, Cornwall, Ont., of which W. W. Thomson is the owner, recently made an assignment to F. C. Clarkson, Toronto. The plant was equipped with four grinders, five wet machines and has a capacity of forty tons of mechanical pulp daily.

New News Print for Manitoba

Word has been received in Toronto that a large news print plant will be built at Pine Falls, Man., by J. D. McArthur & Co., of Winnipeg, and that the amount spent in actual construction will be $5,000,000. The plant site is about three miles from Pine Falls and the original plans have been altered to increase the daily capacity to 200 tons. The whole project was temporarily held up until railway facilities were assured. Following the announcement from Ottawa of the contemplated construction of the Canadian National branch railway from East Selkirk to Pine Falls, the work is likely to be proceeded with, all difficulties having been overcome.

Mattagami Plant Going to Capacity

F. C. Clarke, of Toronto, who is treasurer for the receiver of the Mattagami Pulp and Paper Company, Smooth Rock Falls, Ont., recently paid a visit to the plant, and reports that the company has been operating at full capacity since the first of the year and is turning out about 4,000 tons of unbleached sulphite monthly. The conditions at the mill are generally good and there has been no power trouble to speak of.

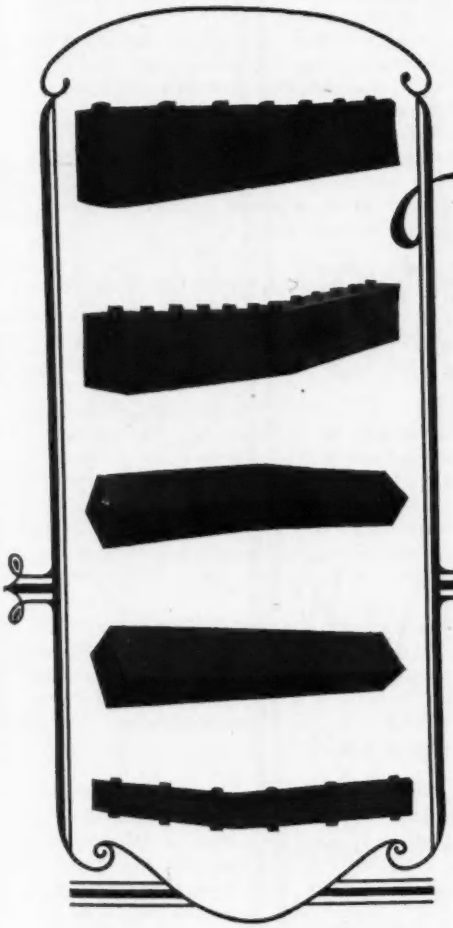
The company hopes within the next few days to get its wood drive down the Mattagami River. This will comprise about 40,000 cords from the company's own limits and, in addition, some 10,000 cords were contracted for with settlers who got out the wood during the winter. While the market for bleached sulphite pulp is weak, the company is disposing of its products chiefly across the line.

More Rumors of Big Merger

Again the rumor has been revived of a merger between the Spanish River and the Abitibi Paper Companies. It is declared that some progress has been made and that tentative papers are understood to be in the hands of the Spanish River lawyers at the present time for consideration.

(*Continued on page* 34)

Dilts-



Bed Plates that give 150% more service

THE special alloy heat treated Bed Plates used in Dilts Beating Engines are another constructional advantage of prime importance.

A *mill making roofing felt reports:

"The Dilts special alloy heat treated bed plate steel wears down very evenly with a clean shear and little or no tendency to split, break or bend. It always has an even cutting surface until entirely worn out. Also, it never burrs.

"We have obtained a general average of 23 days of service from a set of bed plates made up of this steel as against 9 days of service from the ordinary open hearth steel."

*Name on request.

Dilts bed plates, in other words, have given this mill 150% more service.

It is the combined perfection of each constructional detail that makes the Dilts Beating Engine so superior.

Dilts Special Alloy Heat Treated Bed Plates illustrated above:

Sheet Steel Angle Bed Plate
Sheet Steel Elbow Bed Plate
Laid or Solid Steel Plate
Sheet Steel Straight Bed Plate
Elbow Sheet Steel Bed Plate (rough)

6544

Dilts

MACHINE WORKS, Inc. FULTON, N.Y.

EXPORT OFFICE ~15 PARK ROW~ NEW YORK CITY

New York Trade Jottings

Clarence K. Strang and Herbert L. Strang, who carry on business under the name of the Strang Paper Company, wholesale paper dealers at 72 Park Place, have made an assignment to Julius Lichtenberg of 320 Broadway.

* * *

The Capital Paper Company, Inc., 201 East 16th street, has bought from the J. J. Murphy Company all rights and title to the American Flag Bond and is now carrying this paper in all sizes and weights, in white and six colors.

* * *

The Norwegian Paper Mills Agency of Manhattan has filed articles of incorporation with the Secretary of State at Albany, N. Y., with capital stock placed at $20,000. The incorporators are J. H. Kamna, J. Andersen and M. J. Gintzler. The attorney is J. A. Brady 33 W. 42nd street, New York.

* * *

R. S. Kellogg, secretary of the News Print Service Bureau, spent last Thursday at Ithaca where he addressed the students in the Forestry Department of Cornell University upon "The Paper Age" and "The Future of the Forester." Next Tuesday he will address the Inland Daily Press upon the subject of "Forest Conservation."

* * *

The Bankers Trust Company as trustee has issued a statement to the holders of the first and refunding 5 per cent sinking fund mortgage bonds, Series A and Series B of The International Paper Company announcing that the amount of funds now in the sinking fund provided under the first mortgage is $168,100.13. The notice also announces that the trustee will receive at its Corporate Trust Department, No. 10 Wall street, until 12 o'clock noon May 22, 1924, sealed proposals for the sale to it of bonds secured by mortgage sufficient in amount to exhaust such funds.

* * *

The Seaman Paper Company, 200 Fifth avenue, is mailing to the trade, an attractive portfolio of samples illustrating the uses of a new development in the manufacture of coated paper known as the Seaman Sales Producer. The purpose of this new style paper is to give it the full use of a regular letterhead and also to permit the insides and back to be used for half tones to illustrate the merchandise offered. The great advantage of Sales Producer is that you have your letter on one side and a proper exploitation of the merchandise on the other side all in one complete piece of advertising literature.

ABITIBI SIGNS LABOR AGREEMENT

(*Continued from page 32*)

Naturally no details are available, but it is learned in circles which should be in possession of the information, that Abitibi would enter more or less on the terms recently outlined, which places substantial value on Abitibi's unique position regarding extensive limits and low costs of production and accepts Spanish largely on the grounds of its extremely liquid position which, without a merger, it will take Abitibi a year or two to reach. Unless Abitibi's basic position is admitted, the control of that company is likely to refuse to continue negotiations.

Pulpwood Company Secures Charter

Charles W. Cox, Limited, Port Arthur, Ont., with a capital of $100,000 was recently granted a provincial charter to take over the business conducted by Charles Winans Cox and to manufacture and deal in pulpwood and lumber products.

Notes and Jottings of the Industry

The many friends of T. H. Watson, Toronto, who is a director of the Spanish River Pulp and Paper Mills, will sympathize with him in the loss of his wife who passed away recently at the family residence on St. George street.

Bowling is very popular at the present time and several teams have been organized. Both the men and women of the staff of the Provincial Paper Mills, Limited, Toronto, have been busy at five pins during the past season and the activities were brought to a close recently by a dinner which was tendered the players by I. H. Weldon, president of the company.

The Downtown Association, of which F. L. Ratcliff, of the Ratcliff Paper Company, Toronto, is president, have secured a large building and will form a club with all modern conveniences. Mr. Ratcliff, who is at present in England and the Continent, is expected home by the end of the month.

The Hodge-Sherriff Paper Company, Limited, McKinnon Building, Toronto, are adding considerable to their office space which will allow of a rearrangement designed to give greater facilities for handling the office business.

To Rush Work on Algonquin Co. Wet Mill

OGDENSBURG, N. Y., May 12, 1924.—Work will be rushed as rapidly as possible for the new wet mill of the Algonquin Paper Company, which will be erected opposite the paper mill of the company here.

The 15 grinders now in the mill proper will be transferred to the new building as will the lap machines. The building will be of concrete and steel and will be modern in every respect. The room now taken up by the grinders and other machines of the wet mill will be given over to the manufacture of paper and will greatly increase the present output of the paper company. The mill is being run to capacity, turning out about 90 tons of paper each day with a contract caring for the complete output for the coming year.

Special Paper for Liquor Permits

MITTINEAGUE, Mass., May 12, 1924.—The Southworth Paper Company has just completed a large order for special paper for the United States Government to be used by physicians in issuing permits for patients to obtain liquor for medicinal purposes. The paper, which is of the highest grade, is watermarked with the word "Prohibition."

As illustrating the care taken that none of this paper gets into wrong hands the plant has been under the supervision of an official from the United States Treasury Department at Washington aided by a prohibition enforcement official from this district during the entire run of the order. These officials were on duty every day. The company filled a similar order about two years ago.

Freight Rates on Coal Found Unreasonable

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., May 14.—The 1924 Interstate Commerce Commission has handed down a decision in case No. 14193 of the Great Western Paper Company of Ladysmith, Wis., against the Minneapolis, St. Paul & Sault Ste. Marie Railway Company et al. In their syllabus in this case the Commissioners say:

"Rates on bituminous coal, in carloads, from Duluth and West Duluth, Minn., to Ladysmith, Wis., found unreasonable. Reasonable rates prescribed for the future and reparation awarded."

Bids Asked for Toilet Paper

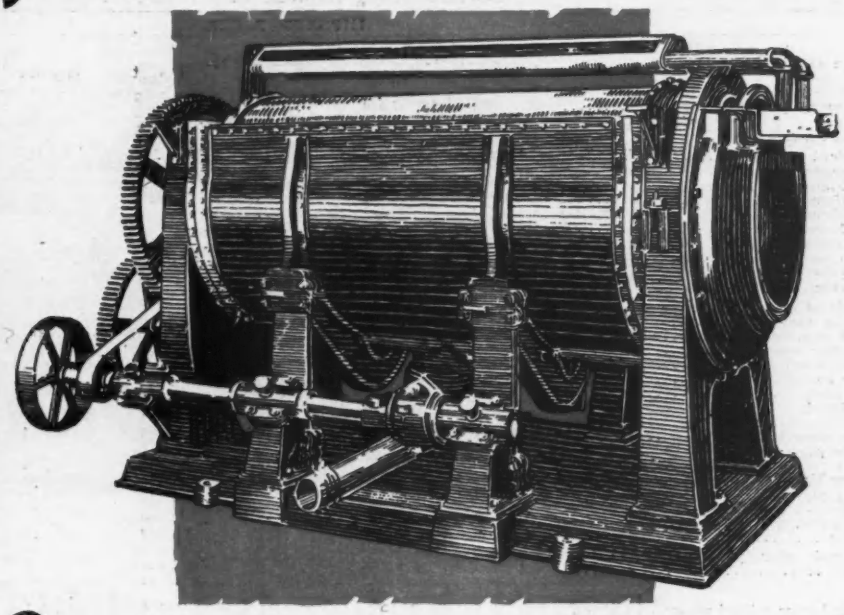
[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., May 14, 1924.—The Bureau of Supplies and Accounts, Navy Department will receive bids on June 3 for 17,000 rolls of toilet paper for the Mare Island and San Diego navy yards.

Bids will be opened on the same date by the bureau for 135,000 rolls of toilet paper for delivery at various eastern navy yards.

14,000 TONS OF PAPER PASS THROUGH BIRD SCREENS DAILY

Why



Bird Screens Increase Production

HAVE you ever estimated the production loss while your paper machine was shut down each day for washing screen plates or for wet end breaks caused by lumps and slime?

Some mills calculate that 5-8 and even 10 tons' production a week are lost in this way.

Bird Screens help you to overcome this loss.

Screen plates are always clean. Shutdowns for washing them are unknown. Quality is more uniform.

Stock delivered to the wire is free from lumps, slugs and slime. Wet end breaks are practically eliminated.

It would be worth your while to study the important influence Bird Screens have on production.

Write for Catalog.

BIRD MACHINERY

BIRD MACHINE COMPANY
SOUTH WALPOLE — MASSACHUSETTS

Western Representative
T. H. Savery, Jr., 1524 Republic Bldg.
Chicago, Ill.

Canadian Builders of Bird Machinery
Canadian Ingersoll-Rand Co., Ltd.
260 St. James Street, Montreal, Canada

BIRD SCREENS

PAPER AND PAPER STOCKS IMPORTS AND EXPORTS OF THE UNITED STATES

For the Month Ending March 31, 1924, and for the Nine Months Ended March 31, 1924, as Compared with Corresponding Months of Previous Year

IMPORTS—PAPER.

Paper and Manufactures of	March 1923 Quantity	March 1923 Value	March 1924 Quantity	March 1924 Value	Nine Months Ending March 31 1923 Quantity	Nine Months Ending March 31 1923 Value	Nine Months Ending March 31 1924 Quantity	Nine Months Ending March 31 1924 Value
Paper, except printed matter (total)	.....	$9,742,629	.....	$10,231,306	.....	$72,758,431	.....	$88,174,551
Printing paper—								
Standard news print lbs. Free	$224,880,385	8,334,836	243,808,618	8,949,309	1,704,601,595	61,241,320	2,000,782,545	75,320,973
Imported from—								
Finland lbs.	4,282,450	142,516	8,274,824	205,156	48,914,526	1,487,405	54,401,039	1,765,763
Germany lbs.	7,229,761	242,872	10,890,035	317,399	56,776,991	1,812,901	85,910,942	2,772,667
Netherlands lbs.	1,316,220	39,250	.....	.....	8,447,380	283,506	235,593	7,642
Norway lbs.	8,052,276	263,827	2,718,821	89,475	39,261,675	1,248,670	36,370,769	1,257,051
Sweden lbs.	13,902,922	457,668	9,320,714	288,766	89,707,963	2,817,708	80,412,156	2,927,186
Canada lbs.	188,953,238	7,150,946	212,373,958	8,041,287	1,454,938,790	53,370,055	1,727,810,338	66,412,091
Other countries lbs.	1,143,518	37,757	230,266	7,226	6,554,270	221,075	5,641,708	177,997
All other, n. e. s. lbs. dut.	701,519	39,910	2,189,528	88,861	7,362,596	419,416	14,560,363	672,241
Grease-proof and water-proof papers lbs. dut.	166,755	18,289	148,031	14,379	[2]1,169,805	[2]108,263	2,248,248	210,642
Wrapping paper lbs. dut.	6,287,607	278,332	.....	.....	63,167,537	2,787,869	[4]44,709,325	[4]1,939,824
Kraft wrapping paper lbs. dut.	.....	.....	2,979,614	112,336	.....	.....	[4]9,838,770	[4]368,403
All other wrapping paper lbs. dut.	.....	.....	1,677,502	66,799	.....	.....	[4]5,953,908	[4]218,195
Writing, drawing, bond, etc. lbs. dut.	203,532	51,860	119,514	27,774	[2]1,413,065	[2]341,330	2,072,271	383,038
Surface coated lbs. dut.	90,416	24,454	253,349	43,711	741,914	202,438	1,112,539	242,576
Tissue paper lbs. dut.	194,976	72,916	132,166	85,760	[2]1,018,911	[2]409,686	1,610,076	679,100
Paper boards—								
Pulp boards in rolls lbs. dut.	7,733,720	228,729	7,741,447	208,524	44,787,348	1,147,054	58,006,206	1,648,766
Other paper boards, n. e. s. lbs. dut.	1,520,792	42,592	1,664,845	48,196	[2]12,330,644	[2]346,727	18,547,355	534,855
Cigarette paper, cigarette books and covers lbs. dut.	1,062,583	245,476	877,348	188,869	.....	2,658,862	7,630,665	1,890,410
Photographic paper lbs. dut.	186,584	46,271	245,079	50,032	1,856,936	391,095	2,030,503	420,948
Hanging paper lbs. dut.	281,389	43,887	562,275	48,735	.....	453,959	11,071,125	504,810
Paper boxes lbs. dut.	.....	.....	133,136	71,154	.....	.....	[4]341,627	[4]206,412
Decalcomania, not printed lbs. free	32,982	10,209	23,242	5,090	.....	73,327	278,415	69,282
All other lbs. dut.	.....	304,888	.....	221,777	.....	2,177,085	.....	2,864,652
Books and other printed matter (total)	.....	625,737	.....	618,105	.....	5,920,489	.....	6,495,480
Books and other printed matter lbs. free	.....	.....	.....	.....	.....	[1]881,331	.....	.....
Books and other printed matter lbs. dut.	.....	.....	.....	.....	.....	[1]578,820	.....	.....
Books and pamphlets in foreign language lbs. free	127,578	113,435	114,236	68,481	[2]860,456	[2]593,512	1,398,765	771,658
Books, maps, music, etc., 20 years old lbs. free	21,082	58,528	28,951	35,447	[2]175,588	[2]1,103,001	251,035	971,162
Other books, etc. lbs. free	190,642	107,785	202,808	110,186	[2]861,957	[2]651,868	1,626,818	1,049,335
Books, pamphlets, and music, n. e. s. lbs. dut.	232,060	208,743	326,446	218,696	[2]1,200,998	[2]1,081,052	2,673,604	1,846,132
Maps, charts and other printed matter, n. e. s. lbs. dut.	.....	51,756	.....	69,283	.....	[2]282,686	.....	599,180
Lithographically printed matter, n. e. s. lbs. dut.	.....	.....	.....	.....	[3]572,749	[3]179,601	.....	.....
Cigar bands, labels and flaps lbs. dut.	13,297	15,842	15,267	14,736	[2]76,771	[2]79,889	180,936	162,596
Decalcomanias lbs. dut.	10,785	17,435	15,251	22,472	[2]80,660	[2]106,427	173,387	247,789
All other lbs. dut.	.....	52,213	.....	78,804	.....	[2]382,302	.....	847,628

CRUDE PAPER STOCK.

Rags for paper stock lbs. free	29,125,727	562,427	50,823,704	1,043,974	257,530,214	4,300,725	305,539,227	5,717,990
Waste, bagging, waste paper, etc. lbs. free	17,704,163	250,873	8,931,855	112,116	[2]87,368,704	[2]1,122,740	73,565,807	900,013
Old rope and all other paper stock lbs. free	9,161,114	420,519	8,656,419	416,702	107,124,116	3,497,771	70,583,336	3,496,421

WOOD PULP.

Mechanically ground tons. free	22,592	828,196	20,136	616,036	195,972	6,263,633	195,742	6,785,864
Chemical wood pulp—								
Sulphite, unbleached tons. free	31,251	1,744,708	31,970	1,709,242	403,573	20,437,887	363,726	21,596,821
Sulphite, bleached tons. free	20,812	1,876,997	25,090	2,095,477	189,348	16,030,889	182,384	15,643,317
Total sulphite tons	52,063	3,621,705	57,060	3,804,719	592,921	36,468,776	546,110	37,240,138
Imported from—								
Finland tons	5,636	303,231	3,756	190,648	39,875	2,006,677	39,774	2,430,245
Norway tons	7,668	571,238	11,569	955,842	58,557	4,071,878	49,702	4,076,170
Sweden tons	7,467	447,308	8,482	482,262	241,425	13,195,408	179,424	11,506,297
Canada tons	25,285	1,886,011	30,758	1,987,383	229,987	15,755,868	222,689	15,730,799
Other countries tons	6,007	413,917	2,495	188,584	23,077	1,438,945	54,521	3,496,627
Sulphate pulp, unbleached (kraft pulp) tons. free	16,497	1,096,761	20,222	1,131,018	214,375	12,610,403	194,519	12,323,216
Imported from—								
Finland tons	197	12,731	633	35,863	9,750	481,632	6,372	383,661
Norway tons	1,904	61,677	3,207	118,970	7,073	382,367	9,666	532,960
Sweden tons	2,928	172,464	3,169	166,632	92,418	4,850,500	77,133	4,652,540
Canada tons	12,368	849,889	13,213	809,553	104,474	6,858,893	99,592	6,634,223
Other countries tons	.....	.....	.....	.....	660	37,011	1,756	119,892
Sulphate pulp, bleached tons. free	3,991	334,268	.....	.....	24,157	1,491,042	5,771	396,931
Other pulp tons. free	.....	10	120	19,128	[2]1,749	[2]87,022	5,825	368,328

CHEMICALS AND OTHER PAPER MAKERS' MATERIALS.

Colors, dyes, stains, color acids, and color bases, n. e. s. lbs. dut.	320,790	418,861	382,921	450,449	[2]1,754,910	[2]2,345,306	2,432,904	3,257,398
Imported from —								
Germany lbs. dut.	202,657	233,750	216,449	243,807	.....	.....	1,221,398	1,490,401
Switzerland lbs. dut.	45,866	78,669	59,587	76,860	.....	.....	671,553	1,017,087
United Kingdom lbs. dut.	8,676	8,962	7,275	6,794	.....	.....	62,741	69,330
Other countries lbs. dut.	63,591	97,450	99,610	122,988	.....	.....	482,212	680,580
Casein or lactarene lbs. free	.....	.....	.....	.....	[3]13,288,534	[3]346,431	.....	.....
Casein or lactarene lbs. dut.	3,010,252	643,354	1,984,619	170,366	[3]13,215,281	[2]2,133,536	11,770,335	1,529,469
Kaolin, china, and paper clay tons. dut.	22,706	253,132	13,549	136,472	236,481	2,542,964	194,049	2,039,162

[1]July 1 to Sept. 21, 1922. [2]Beginning Sept. 22, 1922. (*Continued on page* 38) [3]July 1 to Dec. 31, 1923. [4]Beginning Jan. 1, 1924.

Tablets—but not of Paper

When Sennacherib was preparing to take his Assyrian hordes down through Asia Minor 2600 years ago, he gathered together his army stores and recorded the receipts of grain and cattle as a matter of accountancy.

But the records of Assyria about 700 B. C. were not those of America in this year of grace, 1924. They used tablets for their writing, but their tablets were of clay and the book-keeper could never tear a sheet loose to put it in a file. Their records were enduring enough, but it must have been quite a job to dig the proper receipt from a barrel of tablets that had been collecting for ten years.

Today the tablet is still a favorite writing surface, used by every school child. Today's tablet of white paper, light and convenient, bought for a nickel or a dime, is vastly better than those that Sennacherib with all his wealth could command.

Hammermill Paper Company

Erie, Pennsylvania

PAPER AND PAPER STOCKS IMPORTS AND EXPORTS OF THE UNITED STATES

(*Continued from page 36*)

EXPORTS—PAPER

Paper and Manufactures of	March 1923 Quantity	March 1923 Value	March 1924 Quantity	March 1924 Value	Nine Months Ending March 31 1923 Quantity	Nine Months Ending March 31 1923 Value	Nine Months Ending March 31 1924 Quantity	Nine Months Ending March 31 1924 Value
Paper, except printed matter (total)	.....	$2,324,928	.....	$1,991,345	.....	$18,564,058	.....	$18,593,311
PRINTING PAPER—								
News Print Paper.....lbs.	3,978,361	189,827	2,628,616	126,590	30,051,337	1,431,657	23,804,020	1,199,003
Exported to—								
Canada	73,537	7,100	104,309	9,936	1,329,733	91,059	897,081	74,142
Central America	146,149	7,615	59,792	4,187	1,213,537	65,951	785,466	39,392
Mexico	65,697	4,010	126,250	6,308	927,732	59,882	1,151,062	62,270
Cuba	2,931,623	128,396	1,666,141	73,376	15,828,026	682,689	13,953,661	637,018
South America	214,575	11,510	94,482	4,697	5,292,406	246,288	1,350,396	72,710
Japan	.....	.....	93,037	5,320	594,388	41,407	1,129,917	72,222
Philippine Islands	384,401	18,851	425,528	19,124	3,692,268	178,937	3,157,103	151,968
Other countries	162,379	12,345	59,077	3,642	1,173,247	65,444	1,379,334	89,281
Book paper, not coated.....lbs.	2,383,962	266,443	1,527,057	178,481	22,741,515	2,278,184	16,405,722	1,880,676
Exported to—								
United Kingdom	47,568	10,879	68,752	12,382	477,678	101,517	557,040	105,325
Canada	338,910	41,043	206,358	27,425	2,133,662	250,372	1,522,230	196,562
Central America	40,171	5,668	74,961	7,872	381,317	43,243	596,841	72,144
Mexico	228,792	23,675	101,561	11,372	1,995,384	181,543	1,065,195	128,684
Cuba	704,918	76,521	466,655	53,796	5,455,260	538,823	3,593,453	397,943
Argentina	141,757	15,597	51,899	4,199	1,482,426	141,450	563,223	75,487
Brazil	129,494	14,531	50,884	7,184	1,234,036	132,725	449,222	53,253
Venezuela	14,274	1,703	143,141	15,437	465,350	51,860	477,862	51,434
Other South America	116,190	11,223	45,439	5,329	1,340,961	129,044	848,557	105,384
British India	63,702	6,357	5,246	866	199,820	22,547	100,151	12,417
China	90,667	11,021	94,751	7,460	1,014,696	96,681	2,215,980	212,346
Japan	85,267	6,885	64,209	7,431	2,017,878	157,065	1,258,481	123,693
Philippine Islands	254,059	22,649	83,344	7,357	3,082,562	273,037	1,662,050	154,854
Australia	85,089	12,802	6,753	1,382	725,266	80,799	647,839	85,320
Other countries	43,104	5,889	63,104	8,989	735,219	77,478	847,598	105,830
Cover paper.....lbs.	110,802	18,061	59,425	12,954	1,172,766	163,452	765,909	129,089
Greaseproof and waterproof paper.....lbs.	178,358	22,471	186,777	21,250	1,037,799	136,616	1,357,792	171,671
Wrapping paper—								
Kraft paper.....lbs.	83,675	6,438	38,367	3,593	524,257	41,550	674,164	67,911
Other wrapping.....lbs.	2,468,057	190,742	2,122,077	181,341	21,930,396	1,574,299	17,862,924	1,501,642
Writing paper, except papeteries.....lbs.	492,584	81,224	242,746	43,175	5,533,438	826,259	4,205,759	724,970
Surface-coated paper.....lbs.	334,249	56,810	349,570	54,637	2,779,901	412,544	2,719,697	425,236
Tissue and crêpe paper.....lbs.	254,357	64,435	279,264	58,603	2,427,266	630,415	2,555,792	651,321
Toilet paper.....lbs.	400,277	46,422	326,635	37,438	3,770,576	417,910	3,026,474	344,003
Paper towels and napkins.....lbs.	133,691	19,431	79,180	17,336	734,434	127,638	896,200	159,553
Bristols and bristol board.....lbs.	222,360	16,906	31,531	4,221	1,269,601	117,650	1,017,510	92,903
Paper board and straw board.....lbs.	4,253,288	225,486	6,596,012	262,424	35,943,987	1,666,586	48,578,295	2,133,395
Sheathing and building paper.....lbs.	341,233	16,353	553,473	22,976	4,353,311	153,387	3,307,473	152,705
Wall board of paper or pulp.....sq. ft.	748,777	28,404	1,574,494	47,107	9,203,068	315,480	15,305,361	530,532
Blotting paper.....lbs.	.....	.....	293,394	34,273	.....	.....	[2]746,508	[2]89,586
Filing folders, index cards and other office forms.....lbs.	.....	.....	49,025	14,904	.....	.....	[1]111,885	[1]41,834
Cigarette paper and books.....lbs.	60,787	23,162	68,706	22,844	514,029	187,247	661,139	212,174
Photographic paper.....lbs.	150,409	142,941	104,655	119,605	984,908	1,053,132	1,068,356	995,746
Paper hangings (wall paper).....yard	2,704,526	74,054	2,834,971	72,348	14,509,678	339,550	19,952,811	490,367
Paper bags.....lbs.	677,646	68,656	779,641	72,922	7,791,131	709,751	6,016,745	660,349
Boxes and cartons.....lbs.	1,138,108	90,237	1,330,582	104,075	6,926,099	670,894	8,532,698	817,868
Carbon paper.....lbs.	89,953	67,875	73,158	58,271	523,300	411,014	649,026	503,584
Envelopes.....lbs.	218,375	41,179	150,542	30,000	1,898,266	371,782	1,963,451	400,910
Playing cards.....pack	855,571	95,203	623,598	63,506	6,742,450	791,078	5,612,363	613,199
Cash register and adding machine paper.lbs.	79,203	9,032	106,628	13,569	736,966	77,948	968,843	111,547
Papeteries (writing paper in boxes)...lbs.	22,525	7,958	21,044	9,123	290,639	103,435	285,003	117,659
Other paper and paper products, n.e.s..lbs.	2,765,809	455,178	2,132,938	303,779	31,812,234	3,554,600	20,897,378	3,363,878
Books, maps, pictures, and other printed matter (total).....lbs.	3,721,682	1,476,772	4,350,504	1,485,461	35,084,532	13,088,387	39,490,026	14,095,590
Books and pamphlets.....lbs.	1,935,377	597,288	2,745,474	793,360	17,869,566	6,131,382	22,422,844	7,241,052
Maps and charts.....lbs.	24,277	14,319	19,899	18,806	135,453	126,232	123,935	124,028
Music in books or sheets.....lbs.	42,031	25,528	59,642	34,317	366,369	254,847	483,663	279,323
Souvenir post cards.....lbs.	23,164	10,862	18,769	12,229	306,591	141,453	431,961	177,647
Lithographically printed matter, except post cards and maps.....lbs.	168,356	172,535	163,585	101,244	1,427,552	1,119,782	1,548,350	1,119,505
Other printed matter.....lbs.	1,528,477	656,240	1,343,135	525,505	14,979,001	5,314,691	14,479,273	5,154,035

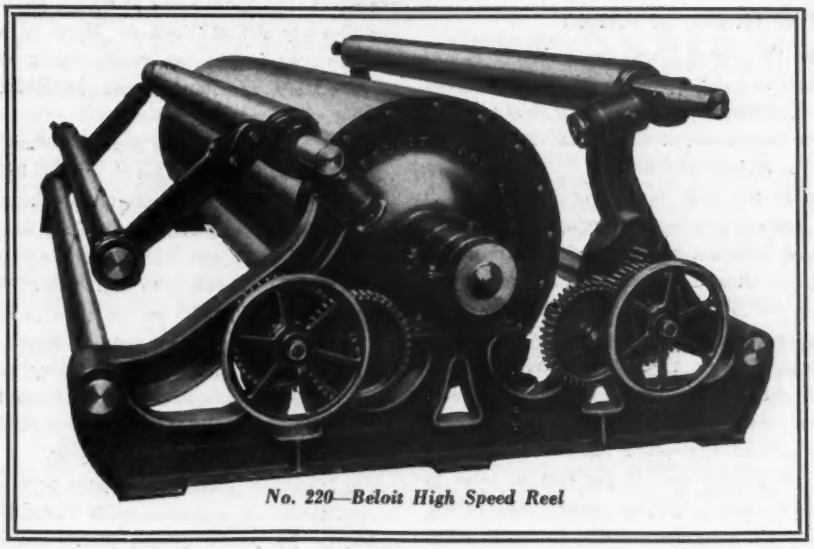
WOOD PULP AND PAPER STOCK

Sulphite wood pulp.....tons	1,245	75,479	1,218	67,796	11,150	645,622	11,274	645,505
Sbda wood pulp.....tons	709	74,953	310	33,054	2,416	213,370	1,318	128,591
Other wood pulp.....tons	193	11,530	169	10,925	1,816	68,154	2,541	139,778
Rags, and other paper stock.....lbs.	9,102,420	163,384	9,601,831	169,143	47,636,744	936,983	93,715,161	1,554,633

PAPER AND PULP MILL MACHINERY

Paper and pulp mill machinery.....lbs.	2,536,147	394,390	636,040	129,675	9,718,939	1,496,463	7,521,391	1,480,409

[1]Jan. 1 to March 31. [2]July 1 to Dec. 31.



No. 220—Beloit High Speed Reel

Insure Yourself Against Loss of Paper, Accidents, Inefficiency

THE BELOIT UNIFORM SPEED REEL effects a saving of paper every time you change reel drums. It displaces the old obsolete method, and insures steady, reliable performance plus absolute assurance of economy of operation. Furthermore, it entirely eliminates the danger of drawing men between reels of the conventional upright type, effecting a further saving in man power and accident liability. It can be depended upon to wind a beautiful roll that is very uniform in hardness.

Moreover the extra refinements added to this reel make it much handier than any of similar design. An instance of this is the ease with which paper is started on the drum. The passer does not have to change hands when performing this operation. Its simplicity and ease of operation is a revelation.

Let us know the face of your calender rolls and we will gladly submit a figure covering your particular case.

Beloit Iron Works **Beloit, Wis., U. S. A.**

Established **Since 1858**

Editorial

Vol. LXXVIII New York, May 15, 1924 No. 20

HENRY J. BERGER, Editor

FOREIGN TRADE IN PAPER

Exports of paper from the United States during March showed a decrease of 2½ per cent in value compared with February, and of 10 per cent compared with March of last year, according to figures just issued by the Department of Commerce. In discussing in detail paper exports the division continues:

The apparent decline in the total exports as compared with February, particularly, appears, however, according to the Paper Division of the department, to be due rather to a decrease in prices than in the volume of goods shipped abroad, since in nearly every case where there is a decrease in the quantity exported the decrease in value is greater in proportion, and in a number of items such as book paper, surface-coated paper, tissue paper, and boxes and cartons, in which there was a very substantial increase in the amount shipped, the value of the products fail to show a like gain. Exceptions are greaseproof and waterproof paper, which showed a gain of 37 per cent in quantity and 75 per cent in value in March as compared with February; and paper towels and napkins, which increased 13 per cent in quantity and 40 per cent in value.

The total exports of paper and manufactures of paper during March were valued at $1,991,345, of which $126,590 represented news print paper, $178,481 book paper, $181,341 wrapping paper (not including greaseproof, waterproof, and kraft paper), $262,424 paper board and strawboard, $119,605 photographic paper, and $104,075 boxes and cartons of paper. All of these except news print and paper board represent an increase in value over the previous month, and exports of the latter show a gain of 1 per cent in quantity, although there was a decrease in sales of 8 per cent.

Exports of paper and board from the United States during the first three months of 1924 were valued at $6,088,890, a decrease of 4 per cent compared with the same period of last year. The decline in the value of shipments during the first quarter of 1924 as compared with 1923 may be ascribed to the same cause as that contributing to the decrease in March exports, namely a decrease in export prices during that month rather than an actual decrease in the volume of shipments.

In this connection it is of interest to note that while the value of March, 1924, exports are under those of March, 1923, exports of January and February both exceed those for the same months last year.

A few of the more important gains were made in exports of paperboard and strawboard, which increased 75 per cent in quantity and 42 per cent in value; sheathing and building papers, which increased 85 per cent in quantity and 69 per cent in value; wall board which increased 108 per cent in quantity and 75 per cent in value; and hanging paper which increased 33 per cent and 40 per cent, respectively. Substantial gains were also registered in exports of kraft wrapping paper, cigarette paper, paper bags, boxes and cartons, and in cash register and adding machine paper.

The imports of paper of all varieties during March showed a substantial increase, the figures for the month being $10,231,3[illegible] as compared with $9,446,221 for February and $9,742,629 for March of last year. The imports of paper for the nine months ending with March were valued at $88,174,551, as compared with $72,758,431 for the same period last year.

The imports of news print especially showed a big gain during the month, the figures being $8,949,309, as compared with $8,044,932 for February and $8,334,836 for March of last year. The imports of news print for the nine months ending with March were valued at $75,320,973, as compared with $61,241,320 for the same period last year.

The imports of wrapping paper including kraft for March were valued at $179,135, as compared with $214,261 for February.

The imports of rags for paper stock during the month amounted to $1,043,974, as compared with $667,987 for February and $562,427 for March of last year. The imports of rags for paper stock for the nine months ending with March were valued at $5,717,990, as compared with $4,300,725 for the same period last year.

The imports of ground wood for March amounted to $616,036 as compared with $525,839 for February and $828,196 for March of last year. The imports of ground wood for the nine months ending with March were valued at $6,785,864, as compared with $6,263,623 for the same period last year.

The imports of unbleached sulphite pulp for March were valued at $1,709,242, as compared with $3,426,361 for February and $1,744,708 for March of last year. The imports of unbleached sulphite for the nine months ending with March were valued at $21,596,821, as compared with $20,437,887 for the same period last year.

The imports of bleached sulphite pulp for March were valued at $2,095,477, as compared with $1,745,408 for February and $1,876,997 for March of last year. The imports of bleached sulphite pulp for the nine months ending with March amounted to $15,643,317, as compared with $16,030,889 for the same period last year.

The imports of unbleached sulphate pulp for March were valued at $1,131,018, as compared with $1,694,276 for February and $1,096,761 for March of last year. The imports of unbleached sulphate pulp for the nine months ending with March were valued at $12,323,216, as compared with $12,610,403 for the same period last year.

PRICE TENDENCY DOWNWARD

The general level of commodity prices according to Bradstreet's sagged in April as it did in each of the preceding four months, but the total reduction was smaller than it was in any but one of these four months. Still, seven groups eased off more or less as against five groups that advanced, and one group—chemicals and drugs—remained steady. The groups decreasing included live stock, provisions and groceries, hides and leather, metals, oils, naval stores and building materials. The advances included breadstuffs, fruits, textiles (very slight), coal and coke and miscellaneous products. The advances collectively footed up a very small amount, whereas the groups declining showed more weight in nearly every instance. Of 106 products recorded in the total price list, thirty-three declined, while twenty-three went up and fifty remained unchanged.

National Roofing Co. Makes Improvements

[FROM OUR REGULAR CORRESPONDENT.]

YORK, Pa., May 12, 1924.—The National Roofing Manufacturing Company, with offices at 44 South George street, this city, and mills at Cly, is at present engaged in a program of expansion which was decided upon some time ago. The company has already installed quite a number of additional dryers on its paper machine, and added another cylinder. Two new buildings, a storage warehouse, 20 by 100 feet and a supply house 20 by 20 feet have just been completed. A No. 2 Miami Jordan, having a capacity of 30 tons in 24 hours, has just been purchased and will be installed in the next few weeks.

Some of the other additions contemplated are a new brick and concrete beater room, more than doubling the capacity of the present room, and a concrete stock chest holding 25,000 gallons, both of which will materially aid in increasing the output of the mill. The products manufactured in this mill are sheathing paper, dry saturating felt, carpet lining, indented packing paper and specialties.

Later on the company intends to install an additional 84-inch paper machine, having a capacity of 25 tons in 24 hours. This machine will be run exclusively on dry saturating felt. Any surplus felt not used in the company's own operations will be sold to other roofing mills.

The company also intends to erect during the coming summer, on land already owned by it, six new dwelling houses, in order better to accommodate the experienced help which is being brought from other cities and mills. These will be bungalow type houses of frame construction. From 30 to 40 men are regularly employed.

In addition to the paper mill, the company also operates a roofing mill at the same location. The chief products of this mill are tarred felt and slaters' felt. On these products, the mill has a daily capacity of 40 tons.

W. T. Hanson, who is a practical paper maker of wide experience, is superintendent of the plant, and has charge of production. Under his supervision, the tonnage production of the paper mill has been trebled since July 1 last.

The company reports that its business for the first quarter of 1924 was the largest in its history, and while orders have fallen off somewhat lately, it has orders enough in hand to keep the mill going steadily.

The present management consists of John F. Young, president; George A. Odewalt, vice-president, and H. O. Ruby, secretary and treasurer.

Forestry Possibilities for Wisconsin

MADISON, Wis., May 9, 1924.—"Forestry in Wisconsin should go hand in hand with the agricultural development of the state," said Dr. Hugh P. Baker, executive secretary of the American Paper and Pulp Association before the Kiwanis Club today, "and as a native of the state I am proud to say that the forestry movement in the state is developing handsomely, as compared with many other middle western states. The development of forestry practice needs to be encouraged, however, for even the present progress is not as great as should be the case in a state with such wonderful resources in land adapted for the practice of forestry.

"Not the least interesting evidence of the development of forestry sentiment is the organization perfected only a few months ago by the paper manufacturers of the state in the formation of the Wisconsin Forest Protective Association, an organization which is securing much support from the lumber industry as well. The securing of legislation of a truly progressive type which will encourage the growing of trees as a crop to be used by the state's industries is necessary, however, if the forest land is to be adequately used.

"I am one of those who believes that forestry today has passed the sentimental state, and has become an economic factor in the nation's development. I believe that trees can be planted, and forestry practiced along scientific lines with the possibility of financial profit.

"Wood has been too cheap, but has now reached a cost to industry which forces forestry into the economic stage. An idle acre is as much an economic loss as an idle man. Wisconsin's agricultural land should be utilized to produce agricultural products. Its land not fitted for agriculture, but primarily for forest growth, should be utilized, and not allowed to remain idle."

Supplemental Statement on Casein

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., May 12, 1924.—In connection with the announcement which has been made by the United States Tariff Commission that a supplemental hearing will be held on the casein tariff on June 23, a supplemental statement of information has also been made public.

This statement includes a further investigation in both Argentina and the United States with regard to the quantity and value of whole milk purchased during 1922. It also includes the quantity and sales value of the products produced from whole milk relevant to the ascertainment of raw material costs in the production of casein.

As the result of this supplemental investigation the experts of the Tariff Commission have made slight modifications of both the foreign and domestic conversion costs of casein.

In the supplemental report the Tariff Commission experts take up the methods of evaluating skim milk, the conversion and marketing costs, material costs, and a comparison of costs by various methods.

In the supplemental report the commission has requested that the discussion of the interested parties at the forthcoming public hearing be directed primarily to a consideration of the following points:

"1. The value of whole milk in Argentina for casein production purposes.

"2. The value of whole milk in the United States for casein purposes.

"3. The method to be used in both countries in ascertaining the value of skim milk entering in the production of casein.

"4. The question whether in ascertaining the cost of production of casein a return on the capital employed in the business should be included."

Stocks of Pulpwood

Heavier stocks of pulpwood on hand in New England, but lower stocks than at the same time in 1923 in New York and the Middle Atlantic states are shown by the quarterly pulpwood report prepared by O. M. Porter, Assistant Secretary of the American Paper and Pulp Association. The lake state stocks are slightly above the figures of a year ago as are those of the south. On the other hand, outstanding contracts in New England are less than a third of the total of the same date last year, New York State 10 per cent higher, and the lake states lower. The total of wood on hand or contracted for is about the same in New York and New England as a year ago, but much lower in the other three regions.

Prices show a wide variation. New York State mills have paid more for peeled spruce and balsam than at any time since the fall of 1921, but in New York and the lake states, the prices are somewhat lower than in March, 1923.

The figures show that the usual input of pulpwood for future consumption has featured the last few months, the stocks on hand in New York and New England showing a large increase over the stocks on hand in September.

The number of mills reporting for March was larger than for any other period since this compilation was begun, except in December, 1923.

The pulpwood quarterly statistics were formerly compiled by the Woodlands Section, and are being continued by Mr. Porter, who handled this task for that section.

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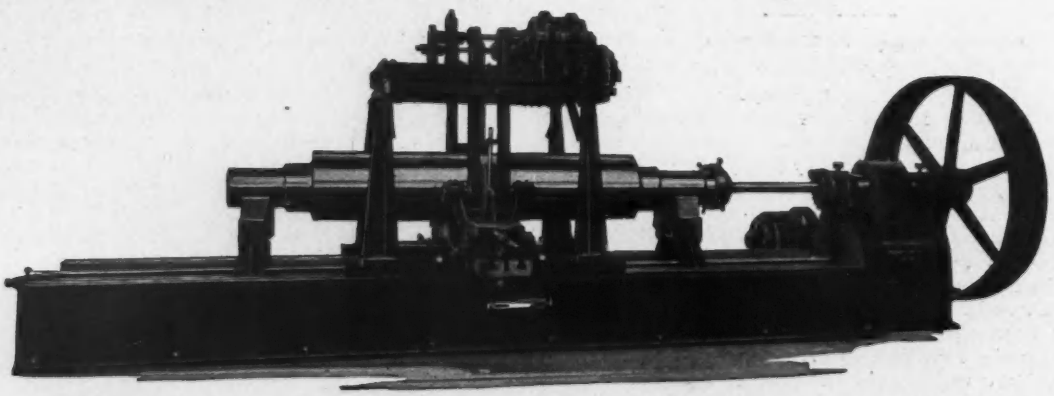

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Conducted by W.G.MacNAUGHTON, Secretary

STUDIES IN THE UTILIZATION OF DECAYED PULPWOOD

Following the presentation of reports by the Forest Products Laboratory on this subject at the meetings of the pulp and paper industry in New York City during the week of April 7, a conference was held at the office of the News Print Service Bureau on April 11, 1924, at which the following were present: Ellwood Wilson, Chairman, Woodlands Section, Canadian Pulp and Paper Association; O. M. Porter, Secretary, Woodlands Section, American Paper and Pulp Association; W. G. MacNaughton, Secretary, Technical Association of the Pulp and Paper Industry; Messrs. Rue, Humphrey and Rawling, Forest Products Laboratory; C. W. Boyce, Forest Service; George D. Bearce and R. S. Kellogg, News Print Service Bureau.

Use of Laboratory Funds

A brief resumé was presented of the results obtained to date through the use of Laboratory funds and co-operative allotments made by the industry. It was stated that of the $1,000 contributed by the Woodlands Section of the A. P. & P. A. and $2,000 by the Woodlands Section of the C. P. & P. A. for the year beginning January 1, 1924, there is at this time an unexpended balance of approximately $1,500 available for further work; also that it is anticipated that an allotment of $5,000 from the Laboratory appropriation for the fiscal year beginning July 1, 1924, may be devoted to these studies through the temporary curtailment of some of the other fundamental Laboratory investigations, which seems to be warranted, because of the emergency nature of the present project.

Problems Recommended for Attention

After full discussion it was unanimously recommended that the following phases of the problem receive the principal attention of the Laboratory and of the industry during the coming year to the extent made possible by available funds:

1. Hardness Tests.—To be continued along lines now being worked upon by the Laboratory and the Laurentide Company; this to be a project which requires no great expense.

2. Sinkage.—Water absorption tests of wood affected with decay in various stages to be made on small pieces at the Laboratory and studies of sinkage to be made by the Laurentide Company upon standard logs.

3. Sulphite Tests.—To be made at the Madison Laboratory on news grade sulphite with standard tests on the bleaching of pulp from decayed wood and its beating properties.

Sulphite tests of private nature are also running at the Laurentide Company on a larger scale than is possible at Madison and it is hoped to interest some company in the United States to carry on similar tests at one of its mills.

4. Pathological Survey.—Such a survey to determine the kinds of decay in pulpwoods in other regions than Quebec (which has already been studied) to be carried out in other regions to the extent that financial assistance therefor can be secured from co-operating interests.

5. Application of Results.—It was strongly felt by those present that just as rapidly as possible the results already attained should be applied to the selection of timber in the woods, in order to promote more complete utilization of material which is rapidly being destroyed. Two forms of publication were therefore recommended.

a. Publication of instructions for scalers, illustrated with colored wood sections by the Woodlands Section of the C. P. & P. A., the text to be written by Mr. Wilson in the near future.

b. Publication of a condensed practical statement of the results of the Laboratory studies to date, prepared especially for the information of executives, the manuscript to be written by Mr. Rue, edited from the standpoint of the practical mill executive by Mr. MacNaughton and published in the names of the co-operating organizations, that is, the Canadian Pulp and Paper Association, the American Paper and Pulp Association of the News Print Service Bureau.

Advisory Committee Named

An Advisory Committee to work with the Laboratory in carrying forward the foregoing projects during the coming year was named as follows: W. G. MacNaughton, O. M. Porter, Ellwood Wilson. R. S. Kellogg, chairman.

Study Glue for Coating Paper

[FROM OUR REGULAR CORRESPONDENT.]

Washington, D. C., May 14, 1924.—The paper laboratory of the Bureau of Standards has been making a study of the possibility of using glue in the coating material for paper for some time.

Different grades of the glue have been studied and apparently the lowest grade gave as good results so far as adhesive quality is concerned as any of the better ones. The experts say that this indicates that possibly lower grade glues than those previously considered may be suitable for this work or at least that it may be possible to lessen the amount of the higher grade glues used in the coating mixture. The elimination of the mottled appearance of the coating has also been studied. Apparently this is not due to any characteristic of the paper structure but is caused by air bubbles held in suspension in the coating. The ordinary foam preventatives seem to have little beneficial effect and further study will be required to overcome this difficulty.

THE UTILIZATION OF DECAYED WOOD IN THE CHEMICAL PROCESSES

By John D. Rue[1], R. N. Miller[2] and C. J. Humphrey[3]

The rapid depletion of the available pulpwood supplies in the United States makes it necessary to take measures leading toward a more complete utilization of the remaining timber. Any utilization of material heretofore regarded as worthless or of doubtful value will permit an immediate increase in the available supply, and the present efforts to bring about such utilization are particularly timely.

Wood-rotting fungi rank with fire in the extent of their destruction of timber. Considered in connection with insect pests they constitute one of the most threatening natural agencies in the reduction of the available pulpwood supply. The large quantity of partially decayed wood to be found in our pulpwood forests therefore makes the study of the value of such material for pulp an important step toward the conservation of our resources.

The possibility of utilizing partially decayed wood by the mechanical process has been given some attention by the Forest Products Laboratory and by the industry itself. The limitations upon its utilization for groundwood are still very indefinitely understood, and the subject demands much further study.

Fig. 2

Balsam wood infected throughout with the fungus fomes pinicola. Advanced stage on left. Early stage on right.

Decayed Spruce for Easy-Bleaching Sulphite Pulp

This paper will be confined, however, to a discussion of the use of decayed wood in the sulphite and soda processes, and chiefly in the former.

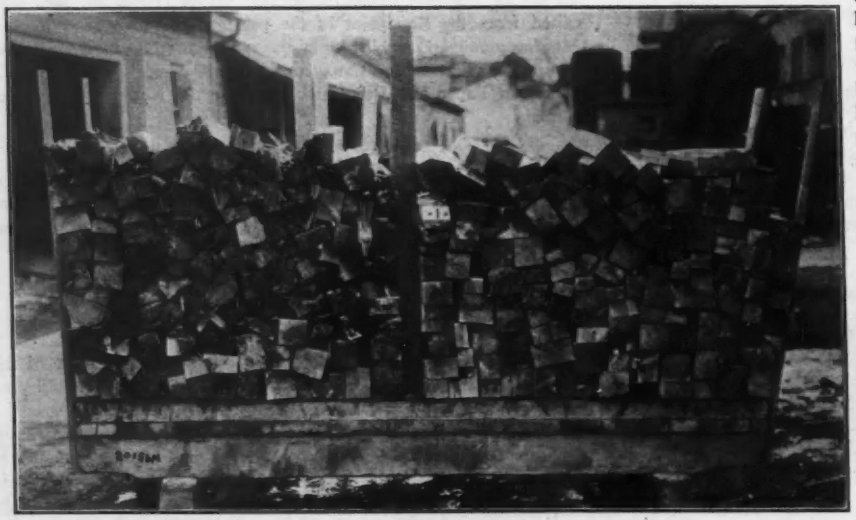

Fig. 1

Mixed feather rots in balsam. Advanced stage on left. Early stage on right.

In 1919 the Forest Products Laboratory began, with the co-operation of the American Paper and Pulp Association, a study of the losses involved in the storage and use of decayed wood. Very little was known at that time regarding the relative abundance of the different kinds of rot prevalent in pulpwood and still less regarding the nature of the specific action of the different fungi on the wood.

The study included a brief investigation of the value of decayed spruce for easy-bleaching sulphite pulp. The selection of the wood was made not so much with reference to the specific fungi which infected it but rather with reference to the general condition of decay. One sample of spruce, however, showed the presence of at least five known kinds of rot. Only one sample (referred to as "rejected" wood) was so badly decayed that it would normally have been considered unfit for the pulp mill, although the value of some of the others was distinctly questionable.

The conclusions reached as a result of that investigation may be briefly summarized:

The yields of screened sulphite pulp, on a weight basis, obtained from the decayed spruce woods were not much lower than the yield from sound spruce except from the sample of "rejected" wood. In the latter case the yield was 38.5 per cent and the pulp was bleached with 20 per cent bleaching powder to a standard white. The wood itself was 50.2 per cent soluble in 1 per cent NaOH and contained only 42 per cent cellulose. Had its density been determined it would doubtless have been found low. Low density combined with low yield per unit weight results in very low yields per unit volume. In mill practice the mechanical losses which occur in the wood room during the

[1] In charge, Section of Pulp and Paper, Forest Products Laboratory, Madison, Wis.
[2] Chemist in Forest Products, Forest Products Laboratory, Madison, Wis.
[3] Pathologist, Office of Forest Pathology, Bureau of Plant Industry, Madison, Wis.

barking, chipping, and other operations would lead to still lower yields per cord from such material.

All of the pulps were beaten and made into paper, and were then found to be somewhat weaker and more brittle than pulp from sound wood. The pulp from the "rejected" wood stood out from the other samples in that it was weaker and more brittle.

The "rejected" wood was four years old and was rotted mainly by *Fomes roseus* The low yield of easy-bleaching pulp obtained from this sample and the poor quality of the pulp when subjected to beating do not necessarily prove that all rotted wood is equally low in value. In fact, studies recently made, clearly indicate that different kinds and types of decay organisms produce widely differing effects upon the value of wood for sulphite pulping.

Decayed Hemlock for Wrapping Grade Sulphite Pulp

In 1922 an opportunity was offered to carry on, in co-operation with a pulp and paper manufacturer, a limited study of infected hemlock as a raw material for wrapping-grade sulphite. One of the outstanding conclusions from this study is that hemlock may be considerably discolored and infected without showing, when compared with sound wood, any perceptible reduction in yield per unit weight or more than a small reduction in yield per unit volume, the volumes in this case being based on the mill scale of the logs and expressed in board feet.

Hemlock is very susceptible to decay. An intensive investigation, especially in the Lake States, should be made of the extent to which the rotted logs can be used with profit in the sulphite industry.

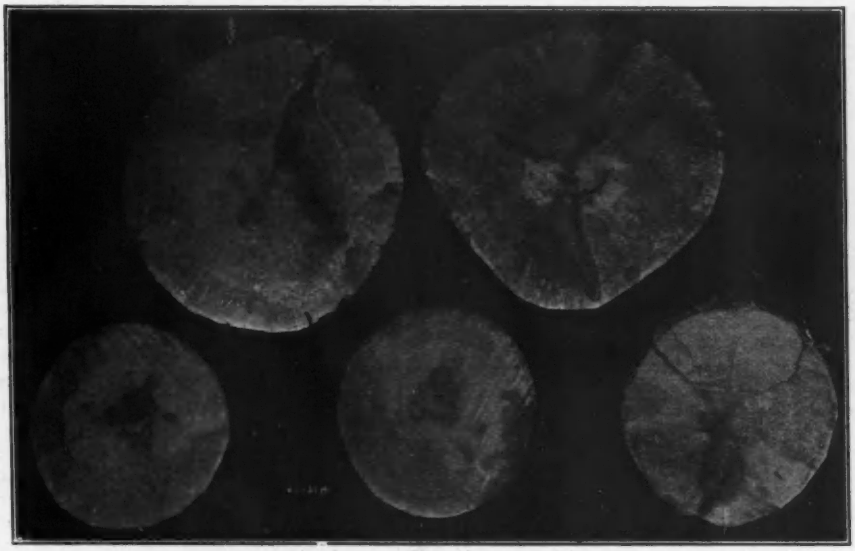

FIG. 4

Infected aspen wood after three years' storage

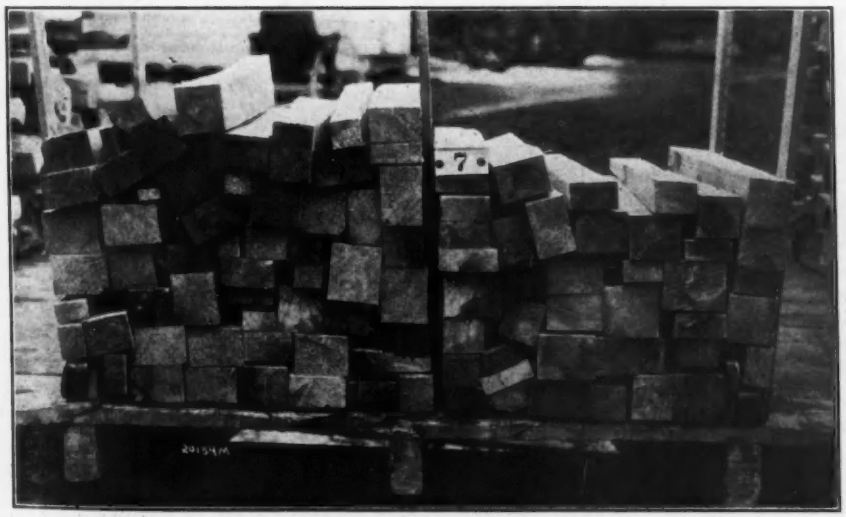

FIG. 3

Spruce wood infected throughout with the fungus tra metes pini. Advanced or pocket stage on left. Early or non-pocket stage on right.

In the earlier studies above referred to some slight attention was given to the use of decayed aspen in the soda process. The results indicated a high consumption of chemicals and low yields of pulp.

Decayed Aspen for Soda Pulp

At a later date an opportunity was afforded through co-operation with another pulp manufacturer to initiate a study of the changes in the yields and quality of aspen pulp which result from the development of decay during storage.

The first tests were made on two samples—one of sound aspen freshly cut from the same area from which the other sample had been cut approximately one year earlier. The latter, with its bark still on, had been stored in the mill yard. Several logs of the stored wood showed fruit-bodies of the rot *Stereum purpureum*, although the wood itself, except for a small amount of heart rot in a few of the logs, was firm. Any disintegration which had started had not progressed far enough to soften the wood appreciably. A third sample was recently taken from the same storage pile after the wood had been stored for about three years in all. The wood by that time was so badly rotted that it was soft and punky throughout a large part of its volume, although discoloration was not particularly marked. The three samples were all pulped under the same conditions, so that the results are comparable.

The wood after one year's storage showed little change in yield either by weight or by volume. At the end of three years' storage the yield obtained, 47.1 per cent on the basis of the dry wood, shows a slight increase. The density of the wood was markedly decreased, however, and the yield per hundred cubic feet of wood was lowered to 810 pounds as compared with 1023 pounds from sound wood.

A complete report of the investigations conducted by the Laboratory from August, 1919, to July, 1923, on decayed wood and wood pulp, except those on hemlock and aspen just referred to, is now in the hands of the printer to be published as a bulletin of the Department of Agriculture. The information here given regarding the earlier studies was abstracted from the manuscript of that bulletin.

Decayed Balsam and Spruce for News Grade Sulphite Pulp

About one year ago a further valued opportunity was given the Forest Products Laboratory to continue its study of the value of decayed woods for pulp. This opportunity was provided through the co-operation of the News Print Service Bureau, the Laurentide Company, Ltd., and Price Bros., Ltd. The study was directed especially to the application of rotted spruce and balsam to the making of news grade sulphite pulp. The co-operative arrangement made possible the selection of a quantity of balsam and spruce wood, both living and dead infected with organisms which commonly occur in either one or the other of these species. It was possible to select samples of wood infected with individual organisms or types of organisms. Five typical species or types of wood-destroying fungi were represented in the wood selected. The logs, with the exception of one sample, were so far decayed that they would normally have been left in the forest.

The wood was taken as it came, the whole log, after barking, being chipped and cooked; only the knots and over-size pieces were picked out. Much of the wood in some of the specimens was so badly softened that obviously it would not have withstood wood-room operations. In commercial practice it would not get into the digesters and would be a certain loss.

A detailed report of these studies was presented to the Woodlands Section of the Canadian Pulp and Paper Association in January of this year.[4]

It was shown in the report that discoloration of the wood was not a reliable indication of probable yields and that wood may have a large proportion of its volume discolored by decay without showing material loss in pulping value. This is in accord with the indications already noted in the study of decayed hemlock. One of the best indications of low yields per unit weight was the degree to which the wood had been softened.

A decrease in the density of the wood did not of itself necessarily indicate a corresponding decrease in yield per unit weight. In the case of balsam decayed by *Polystictus abietinus* the yield per unit weight was nearly normal, but owing to the low density the yield per unit volume was low. In the case of the poorest grade of balsam decayed by "Hemlock heart rot"[5] and of balsam decayed by *Fomes pinicola,* low yield per unit weight and low density combined to give a much reduced yield per unit volume. In the case of spruce infected with *Trametes pini* the yield per unit weight was actually greater than for sound wood. The density, however, was less than for sound wood so that the combined effect of these two conditions was a yield per unit volume not far from normal.

It has become evident in the course of the investigations that different types of rot have quite different effects upon the yield and quality of the pulp which may be obtained. It is particularly important, therefore, that in studying the pulping value of decayed wood due consideration be given to the type of rot as well as to the extent to which it has acted upon the wood. From a practical standpoint it is necessary to become familiar with the easily recognizable characteristics of the various prevalent types of rot and to relate these characteristics to the yield and quality of pulp that may be obtained from the wood exhibiting them.

Pulping of Completely Infected Balsam and Spruce

Selection of Samples. In order to study more intensively the effect of the various types of rot upon pulping value the individual rots were freed from all sound wood. Attention was first focused on the samples rotted by *Fomes pinicola, Trametes pini,* and mixed feather rots.

Fomes pinicola, common in dead balsam stubs or snags, begins on the outside of the log and works inwards, reducing the wood to a friable mass in the later stages.

Trametes pini is a type of rot very easily recognized on account of the white spots or "pockets" which are present in the later stages of infection, the pockets usually being lined with loose white fibers. In the balsam and spruce forests this fungus is confined almost exclusively to the spruce, attacking the heartwood of living trees for almost the entire length. The affected heartwood soon becomes brownish or reddish in color. Portions of the wood in the early stages of infection may lack the white spots or "pockets," but these are usually present in some portion of the trunk, so that the rot can be readily identified by the woodsman.

The feather rots[6] of balsam occur usually in the lower part of the trunk and roots. The affected wood becomes clay to buff colored and in the early stages of infection is quite firm, later separating along the lines of the annual rings into thin plates or shreds. Eventually these also may disappear in the butts, leaving a cavity. Since the fungus is largely confined to the butt log the proportion of the total tree infected is not large.

The wood selected was prepared by sawing out all the sound wood and leaving only the infected part. This was further divided into two parts representing different stages in the disintegration of the wood. The grading was carried out partly by visual inspection and partly by the use of a "Yankee" automatic drill No. 41 with an 11/64 inch bit. This tool was pressed against the wood on both the end and the side in such a way as to secure the effect of one complete compression of the spring, and the depth of penetration into the wood was noted. In the case of the wood infected with *Fomes pinicola* the drill sank to the full length of the bit, about three inches, in material representing the advanced stage of disintegration, whereas penetration into the early stage was not over half an inch. The same division line was drawn in the case of the mixed feather rots, namely: over one-half inch penetration, advanced stage; less than one-half inch, early stage.

The wood infected with *Trametes pini* did not show a great difference in firmness as between the early and advanced stages. In this case classification was largely based upon visual inspection and determined by the presence or absence of the white pockets produced by the organism in its later stages. The wood after grading is shown in Figs. 1, 2 and 3.

Density determinations were considered impracticable on account of the badly decayed condition of some of the specimens.

Cooking. The cooks on the several grades of rotted wood were carried out in the same way as for those previously reported.

Yields Under Three Types of Infection

The yields of oven dry screened pulp from the completely infected wood are shown in Table 1, together with the yields presented in a former paper, from the mixture of sound and infected wood obtained by chipping the entire log. The yields by weight showed a different relation for each of the types of infection.

The wood infected with *Fomes pinicola* in both early and advanced stages showed a decided decrease in yield per unit weight. Although not determined, the density of the infected wood was noticeably lower than that of the sound. Low density combined with low yield per unit weight would indicate very low yields per unit volume.

The wood infected with mixed feather rots showed only a small reduction in yield per unit weight, even in the advanced stage. Here again a noticeable but undetermined loss of density points to a lower yield per unit volume as compared with that from sound wood. The difference would not be so great, however, as in the previous type of rot.

In the case of wood infected with *Trametes pini* the yield per unit weight for the pocket, or advanced, stage was found to be higher than that for the less advanced, non-pocket stage. In this

[4] Decayed Wood for Sulphite Pulp, by J. D. Rue, R. N. Miller and C. J. Humphrey, Paper Trade Journal, Vol. 78, No. 4, p. 45, Jan. 24, 1924; *Pulp and Paper Magazine* of Canada, Vol. 22, No. 4, p. 93, Jan. 24, 1924; Paper, Vol. 33, No. 18, p. 12, Feb. 21, 1924.

[5] J. H. Faull, in The Treatment of Decayed Wood In and Outside the Mill, *Pulp and Paper Magazine* of Canada, Vol. 22, pages 255-257, Feb. 28, 1924, prefers the term "Red Heart Rot" and ascribes its cause to the fungus *Stereum sanguinolentum.*

[6] J. H. Faull (loc. cit.) attributes one of these rots to the fungus *Poria subacida.*

case lower density offsets the higher yield per unit weight and brings the yield per unit volume slightly below that from sound wood.

The differences between these three types of rot in their effect upon the yield of pulp are quite in accord with their action on the wood as indicated by chemical analysis.

TABLE 1—YIELD OF PULP

Description of the sample	Nature of infection	Volume of discolored wood—Per cent	Wt. per cubic foot of wood—Lbs.	Yield of oven dry screened pulp—Per cent	Yield of oven dry screened pulp per 100 cu. ft. of wood—Lbs.
	Sulphite Process				
Balsam:					
Sound	None	None	20.8	49.6	1,031
Whole log	Mixed feather rots	31	21.0	50.6	1,062
Early stage	Mixed feather rots	100	....	48.4	.....
Advanced stage	Mixed feather rots	100	....	48.6	.....
Whole log	Fomes pinicola	69	18.0	40.0	720
Early stage	Fomes pinicola	100	....	43.9	.....
Advanced stage	Fomes pinicola	100	....	31.8	.....
Spruce:					
Sound	None	None	26.2	45.7	1,197
Whole log	Trametes pini	96	22.3	51.1	1,040
Non-pocket stage	Trametes pini	100	....	49.7	.....
Pocket stage	Trametes pini	100	....	52.4	.....
Hemlock:					
Sound	None	None	....	46.15	1,255*
Infected		60*	....	44.8	1,114*
	Soda Process				
Aspen:					
Sound	None	None	22.34	45.8	1,023
Stored 1 year	Stereum purpureum and others.	...	22.16	45.8	1,011
Stored 3 years	Stereum purpureum and others.	...	17.2	47.1	810

*Yield per unit volume and volume of discoloration based upon log scale using 500 board feet per cord.

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In Table 3 are shown the analytical data[1] determined for the wood samples whose pulping tests have just been discussed. The action of *Fomes pinicola* resulted in low cellulose content, diminishing with advance of decay, leaving a relatively high proportion of lignin. The action of the fungi producing the mixed feather rots resulted in a small reduction in cellulose content in proportion to lignin, the reduction varying only slightly with the advance of decay. *Trametes pini* attacked the lignin chiefly, leaving a relatively high proportion of cellulose which increased as the decay progressed.

QUALITY OF PULP. The strength of the pulps is indicated in Table 2. Obviously pulp from wood decayed to an advanced stage by *Fomes pinicola* would be of little value, being weak in pop and tensile test and very brittle. All the others are commercially usable.

All the pulps from decayed wood showed the lowering of color expected from the earlier work.

[1]Supplied by M. W. Bray, Chemist in Forest Products, Forest Products Laboratory, Madison, Wisconsin.

Characteristics of Wood Indicative of Pulping Value

The ultimate object of these and similar investigations is to establish an intelligible relationship of the experimentally determined pulping value of wood in various conditions of decay to such characteristics of the wood as may readily be recognized and evaluated by the woods operator and the scaler. There must be placed in the hands of the practical operating men information which will permit them to form reasonably accurate judgments of wood value after only a rapid and superficial examination. While the information obtained from the investigation thus far carried out is not sufficient to meet this demand completely, it does indicate what further knowledge is required and how it may be secured.

One of the most important facts developed is that some kinds of rots are very destructive to yield and quality of pulp whereas others have relatively little effect except in the last stages. Sufficient information is already at hand regarding a few of the prevalent species of rot in spruce and balsam to make recognition of them comparatively easy. The effect of 5 of these species on pulping value has been determined to a limited degree. Other species of rot are, however, common in spruce and balsam and other woods. A survey should be made of the important pulpwood areas, the distinctive characteristics of the prevalent rots determined, and the pulping value of the wood so rotted thoroughly investigated.

An important conclusion growing out of these studies is that firmness of the wood appears to be a very helpful indication of the pulping value, especially when supplemented by a knowledge of

TABLE 3—CHEMICAL PROPERTIES OF THE DECAYED WOODS
(Data calculated to oven dry weight of wood)

Description of the sample	Nature of the infection	Volume of discolored wood—Per cent	Solubility in 1 per cent alkali—Per cent	Lignin Per cent	Cellulose Per cent	Yield Per cent
Balsam:						
Sound	None	None	9.3	30.7	57.1	49.6
Whole log	Mixed feather rots	31	11.9	31.8	54.8	50.6
Softened	Mixed feather rots	100	17.1	32.1	51.2	48.4
Badly softened	Mixed feather rots	100	17.4	33.0	49.6	48.6
Whole log	Fomes pinicola	69	20.6	34.5	49.7	40.0
Softened	Fomes pinicola	100	25.3	36.4	45.3	43.9
Badly softened	Fomes pinicola	100	40.7	44.1	35.7	31.8
Very badly softened	Fomes pinicola	100	50.2	52.8	25.2	Not cooked
Spruce						
Sound*		None	10.4	28.4	58.4	45.7
Whole log	Trametes pini	96	15.6	25.8	59.8	51.1
Non-pocket stage	Trametes pini	100	12.6	29.6	57.7	49.7
Pocket stage	Trametes pini	100	14.1	27.5	58.5	52.4

*The sound wood was white spruce and the decayed woods black spruce.

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TABLE 2—STRENGTH OF PULPS
(Numbers at top of columns refer to minutes in ball mill)

Description of samples	Nature of infection	Volume of discolored wood	Bursting strength 20 Pt.	Bursting strength 40 Lb.	Bursting strength 60 Ream	Breaking length 20 Meters	Breaking length 40 Meters	Breaking length 60 Meters	Double folds 20 Number	Double folds 40 Number	Double folds 60 Number	Tearing resistance 20 Gm.	Tearing resistance 40 Lb.	Tearing resistance 60 Ream
Balsam:														
Sound	None	None	0.93	1.02	1.04	3,625	4,880	4,353	4,765	3,231	1,783	2.20	2.15	2.36
Whole log	Mixed feather rots	31	1.09	1.22	1.23	5,986	5,571	4,871	1,701	1,603	1,479	2.27	2.26	2.29
Early stage	Mixed feather rots	100	0.75	0.84	0.86	4,786	5,016	4,655	1,078	1,051	777	2.65	2.23	2.39
Advanced stage	Mixed feather rots	100	0.92	0.95	1.04	5,685	5,198	4,730	616	739	991	2.33	2.15	2.33
Whole log	Fomes pinicola	69	0.91	0.88	0.66	3,507	2,708	2,339	1,014	787	295	1.63	1.73	1.73
Early stage	Fomes pinicola	100	0.88	0.81	0.66	4,660	4,084	3,377	595	465	174	1.71	2.56	2.05
Advanced stage	Fomes pinicola	100	0.32	0.26	0.23	1,956	2,024	1,870	8	5	5	1.07	1.28	1.04
Spruce:														
Sound	None	None	0.80	1.05	1.11	3,355	4,372	4,090	459	1,102	1,141	2.46	2.62	2.50
Whole log	Trametes pini	96	0.77	0.95	1.11	3,075	4,520	4,073	726	910	772	1.97	1.81	1.89
Non-pocket stage	Trametes pini	100	0.73	0.91	0.91	5,425	4,545	4,517	1,782	1,312	704	2.92	2.58	2.59
Pocket stage	Trametes pini	100	0.78	0.85	0.88	4,495	4,955	3,680	707	591	701	2.45	2.94	2.63
Hemlock:														
Sound	None	...	....	....	0.92	4,100	.....	.....	2,700	.....	.....	2.45	....	....
Infected		...	....	....	0.93	.....	3,900	.....	920	.....	.....	....	2.50	....

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the species of fungus causing the decay. Still more information is needed, however, to correlate more definitely, for each of the important rots, the degree of firmness and the value for pulping.

The next point of importance developed is that the color of the wood or the volume of discolored wood compared to the whole volume of the log may frequently be misleading as a basis for estimating the probable yield. It is probably indicative of a darker colored pulp, but even this observation cannot be applied with assurance as to the degree of darkening.

A further matter of interest is the application of density measurements to the prediction of yield. A marked lowering of density will usually be indicative of a lowering of yield per unit volume of wood, but small variations in density may be quite misleading.

If, as in the case of wood infected with *Trametes pini*, the yield per unit weight is higher than that of sound wood, the lower density will prevent any actual gain in yield per unit volume being realized.

Value of Decayed Wood at the Mill and in the Forest

The studies thus far undertaken have attempted only to show the effect of certain types of decay on the losses in yield incident to cooking and on the quality of the pulp. In order to arrive at conclusions as to the economic value of a log lying in the mill yard there are other factors that must be considered; factors which have not as yet been accurately studied. Chief among these are the mechanical losses resulting from barking, chipping, and other wood-room operations. In the case of badly softened wood such operations will reduce the amount of material that reaches the digester. There will be a tendency, therefore, toward lower yields per unit volume of wood, as measured in the yard, than the experimental data would indicate. On the other hand, these mechanical losses would have the effect of removing the most badly rotted portions, so that the pulp finally obtained would be rather better in quality than indicated by experiment. It is essential that wood-room losses be determined in mill operation in order that their relation to type and extent of decay may be established as a basis for the evaluation of the wood. It is safe to assume from the experimental evidence that any wood which withstands the wood-room operation and actually reaches the digester can be cooked by the sulphite process without seriously lowering the quality of the pulp for news print. Whether it can be cooked at a profit will depend upon the factors just discussed.

To go farther back and set an economic value on decayed wood in the forest is a still more difficult problem. It is complicated by all the factors affecting yard evaluation and in addition requires a knowledge of the mechanical losses incident to transportation, the extent to which the progress of the infection already present in the forest may reduce the value of the wood after months and possibly years of transportation and storage, and the extent to which secondary infection may produce still further deterioration. If driving is practiced a further loss by sinkage will be involved. About these factors we know practically nothing, and to gain the knowledge which the problem warrants will require patient and extensive investigation over a long period of time and involve the collection of data from many mill operations.

The authors wish to express to the industry their appreciation of the interest and co-operation shown in these studies; and especially to the Woodlands Section of the Canadian Pulp and Paper Association, the News Print Service Bureau and the Woodlands Section of the American Paper and Pulp Association for their continued support and financial assistance which have greatly facilitated the extension of the investigations.

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TECHNICAL ASSOCIATION OF THE PULP AND PAPER INDUSTRY

18 East 41st Street, New York, N. Y.

To Adapt Income Tax to Reforestation

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., May 12, 1924.—The Senate in committee of the whole, adopted on May 8 without division, Senator Moses' amendments to Section 214 of the Revenue Bill, designed to adapt the federal income tax to the requirements of reforestation.

Senator Moses, who was a member of the Senate Select Committee on Reforestation, has all along taken the position that while the national government is urging the state governmens to adapt their taxation policies to the nature of a crop that may mature only once in a hundred years, it was only proper that the federal government should set an example to the limited extent possible.

In brief, the two amendments permit (1) that in case of managed reforestation the taxpayers may deduct in any one year expenditures thereon not to exceed $15,000 "or 15 per cent of the net income computed without the benefit of this provision, whichever is the greater." Such expenditures, however, may be capitalized at the option of the taxpayer. In that case they will be added to the basis used in the determination of depletion, or of gain or loss; (2) one half only of the net income resulting from the reforstation management shall be used in determining the net income subject to tax. But this provision is limited only to trees left for seed, for further growth and to second growth timber.

The Senate's discussion of the amendment was entirely sympathetic, the only opposition remarks being by Senator King of Utah on the ground that while he favored the objective, the amendment would constitute one more abuse of the taxation power in that its purpose is not revenue but to encourage reforestation.

Sandy Hill Iron & Brass Works Elects Officers

HUDSON FALLS, N. Y., May 12, 1924.—At the annual meeting of the stockholders of the Sandy Hill Iron and Brass Works, the following directors were elected for the ensuing year: A. J. Kennedy, R. C. Tefft, Jr., C. W. Kellogg, H. L. Broughton and J. M. Ferris.

The following were elected officers for the ensuing year: A. J. Kennedy, president; R. C. Tefft, Jr., vice-president, and J. M. Ferris, secretary-treasurer.

BIBLIOGRAPHY OF PAPERMAKING FOR 1923

TAPPI Committee on Abstracts and Bibliography, Contribution No. 42.

COMPILED BY CLARENCE J. WEST, CHAIRMAN OF THE COMMITTEE, AND A. PAPINEAU-COUTURE.

(Continued from last week)

Heuser, Emil.
The pentosan content of lignin.
Cellulosechemie 4, 77-78 (1923); C. A. 18, 327.

Heuser, Emil, and Winswold, Arne.
Lignin.
Cellulosechemie 4, 49-58, 62-68 (1923); C. A. 17, 2706, 3486; T .S. 77, 125.

Hintikka, S. V.
Ligninsulphonic acid and the sulphite liquor lactone.
Cellulosechemie 4, No. 9, 93-94 (Dec. 16, 1923).

Klason, P.
Analytical investigation of the chemical composition of alpha-ligninsulphonic acid.
Svensk Pappers Tid. 25, 364-366, 385-388 (1922); C. A. 17, 3168; T. S. 77, 217.

Klason, P.
Constitution of spruce wood.
Tidsskrift for Kemi og Bergvaesen 2, 53-56, 69-72 (1922); C. A. 17, 3168; T. S. 77, 217.

Klason, P.
The lignin content of spruce wood.
Cellulosechemie 4, 81-84 (Nov. 11, 1923); Svensk Pappers Tid. 26, 319-322 (1923); C. A. 17, 3788.

Lorenz, Rudolf.
The colloid chemistry of wood.
Wochbl. Papierfabr. 54, 1518-1521 (June 2, 1923); T. S. 77, 208.

Paschke, F.
Derivatives of straw lignin. II.
Cellulosechemie 4, 31-32 (1923); C. A. 3487; T. S. 77, 86.

Pictet, Amé and Gautis, M.
Lignin and its relation to coal.
Helvetica Chim. Acta 6, 627-640 (1923); C. A. 17, 3019.

Pringsheim, Hans, and Fuchs, Walter.
Bacterial degradation of lignic acid.
Ber. 56B, 2095-2097 (1923); C. A. 18, 327.

Lubrication

Bromley, Charles H.
Lubrication of paper mill machinery.
Paper Ind. 5, No. 8, 1247-1250 (Nov., 1923); Paper Mill 47, No. 50, 30, 32 (Dec. 15, 1923).

Buzby, H. A.
Lubrication engineer.
Paper Ind. 5, No. 1, 96-97 (Apr., 1923).

Capelle, A. A.
Lubrication and its relation to papermaking.
Paper Trade J. 76, No. 15, 193, 195, 197 (Apr. 12, 1923); Paper 31, No. 26, 122, 124-126 (Apr. 18, 1923).

Kneezel, Harry C.
Grease lubrication.
Paper Ind. 4, No. 11, 1524-1525 (Feb., 1923).

Tobin, R. P.
Lubricants as power and speed generators.
Paper Mill 47, No. 23, 4, 8 (June 9, 1923).

Machinery—Miscellaneous

Berger, O. L.
Kamyr pulp press machine.
Paper Ind. 4, No. 10, 1415, 1417 (Jan., 1923).

Englehart, M. F.
Wear of iron couch rolls.
Wochbl. Papierfabr. 54, 1170 (Apr. 28, 1923); T. S. 77, 95.

Knorr, K. W.
Solution of intricate transmission problems in paper mill.
Paper Ind. 5, No. 1, 89-90 (Apr., 1923).

Millspaugh, W. H.
Suction rolls.
Paper Ind. 5, No. 3, 496-498 (June, 1923).

Paige, A. F.
Modern paper plater drive.
Paper Ind. 5, No. 6, 947 (Sept., 1923); Paper Trade J. 77, No. 4, 56 (July 26, 1923); Paper Mill 47, No. 34, 36 (Aug. 25, 1923); Pulp Paper Mag. Can. 21, No. 30, 747-748 (July 26, 1923).

Spencer, Geo. H.
Antifriction bearings in pulp and paper mills.
Paper Mill 47, No. 22, 12, 14, 16 (June 2, 1923); Paper Trade J. 76, No. 15, 181, 183, 185 (Apr. 12, 1923); Paper Ind. 5, No. 1, 103-106 (Apr., 1923); Tech. Assoc. Papers VI (1923), 114-117; T. S. 77, 93.

Williamson, Harry.
The head box or flow box.
Paper Ind. 4, No. 12, 1683 (Mar., 1923); World's Paper Trade Rev. 79, No. 20, 1736 (May 18, 1923).

Maintenance

Grasselt, H. M.
The small paper mill's maintenance and repair department.
Paper Ind. 5, No. 7, 1065-1068 (Oct., 1923).

Mechanical Handling

Committee on Waste.
Handling materials in pulp and paper mills.
Paper Trade J. 77, No. 17, 45-51 (Oct. 25, 1923); Paper Ind. 5, No. 8, 1289, 1291, 1293, 1295, 1297, 1299 (Nov., 1923); Pulp Paper Mag. Can. 21, No. 47, 1139-1142 (Nov. 22, 1923).

Kagerhuber, John A.
Mechanical handling and conveying equipment in the pulp and paper mills.
Paper Ind. 5, No. 8, 1275-1277 (Nov., 1923).

Williams, Russell B.
Automatization as the solution to labor shortage.
Paper Ind. 5, No. 8, 1277, 1279, 1283, 1285, 1287, 1289 (Nov., 1923).

Mechanical Pulp

Barnes, Frederick.
Pitch troubles in newsprint paper mills.
Chem. Met. Eng. 28, No. 11, 503-506 (Mar. 14, 1923); T. S. 77, 188; C. A. 17, 1715.

Beeman, Lyman.
Use of control methods in grinding (Sedimentation test).
Paper Mill 47, No. 44, 28, 30 (Nov. 3, 1923); Paper 33, No. 3, 12, 17 (Nov. 8, 1923); Paper Ind. 5, No. 8, 1253-1254, 1257 (Nov., 1923); C. A. 18, 468.

Blau, Ernst.
Innovations in grinders.
Wochbl. Papierfabr. 54, 1639-1642, 1712-1714 (June 9, 16, 1923); T. S. 77, 140.

Bohroff, F.
Studies on mechanical paper technology. Bumazhhnaia Promyshlenost 1, No. 3, 193-212 (1922); T. S. 77, 75.

Braun, Carl E.
Automatic pulp grinder regulator.
Paper Trade J. 76, No. 17, 50-52 (Apr. 26, 1923).

Brawn, W. E.
Use of white water in manufacture of groundwood pulp and effect on freeness.
Paper Trade J. 76, No. 25, 50-52 (June 21, 1923); Tech. Assoc. Papers VI, (1923), 91-93; T. S. 77, 140; C. A. 17, 2643.

Breaking of wood grinding stones.
Paper Ind. 4, No. 12, 1659-1660 (Mar., 1923); T. S. 76,220.

Brown Pulp.
Pappens- u. Holzstoff Ztg. 30, 430-431, 486, 488 (May 31, June 14, 1923).

Case, John J.
Disintegration of wood for mechanical pulp.
Chem. Met. Eng. 29, No. 11, 439-440 (Sept. 10, 1923); Making Paper 6, No. 5, 130-132 (Nov., 1923).

Combination operating and load regulating valve for pulp grinders.
Paper Trade J. 77, No. 23, 84 (Dec. 6, 1923).

Development of the wood ginder.
Papierfabr. 21, No. 39, 437-439; No. 40, 445-447; No. 41, No. 42, 462-463; No. 43, 471-473, 454-456 (Sept. 30, Oct. 28, 1923).

Forest Products Laboratory.
Average yield of groundwood pulp from various woods.
Technical Note No. 191. May 15, 1923. 1 p.

Glass, W. L.
New mandrel for magazine grinders.
Paper Trade J. 77, No. 16, 108 (Oct. 18, 1923); Paper 32, No. 20, 12-13 (Sept. 5, 1923); T. S. 77, 188.

Hoyer, —.
Grinding at high temperatures.
Papierfabr. 21, No. 16, 213-216 (Apr. 22, 1923); T. S. 77, 75.

Klein, A.
Recent developments in American mechanical pulp mills.
Papierfabr. 21, No. 30 351-354 (July 29, 1923); T. S. 77, 188.

Klimpke, K.
Regulation of the grinder.
Zellstoff u. Papier 3, 139-145 (June, 1923); T. S. 77, 140.

Manufacturing facts on pulp stones.
Pulp Paper Mag. Can. 21, 870 (Aug. 30, 1923); T. S. 77, 188.

Munro, Wm. A.
Treatment of grindstones.
Paper 33, No. 8, 3-5, 19 (Dec. 13, 1923).

Paper from waste wood.
World's Paper Trade Rev. 79, 2083 (June 15, 1923); T. S. 77, 188.

Roberts, F. W.
Three pocket small grinder as against the magazine type.
Paper Ind. 5, No. 9, 1412 (Dec., 1923).

Steamed Mechanical Wood Pulp.
Papierfabr. 21, 412-415 (1923); C. A. 18, 468.

Sylvester, A.
Automatic regulation of pulp grinders.
Paper 31, No. 12, 28 (June 10, 1923); T. S. 77, 188.

Teicher, Johannes.
Influence of temperature of grinding upon the properties of woodpulp.
Papierfabr. 21, No. 11, 153-158; No. 12, 165-168 (Mar. 18, 25, 1923); Paper 33, No. 1, 3-7; No. 2, 3-5 (Oct. 25, Nov. 1, 1923); T. S. 77, 27; C. A. 17, 2191.

TECHNICAL SECTION, PAGE 192

Paper—Analysis and Testing

Anderson, B.
Tearing test for paper.
Svensk Pappers Tid. 25, 405-406 (1922); C. A. 17, 2783; T. S. 77, 161.

Beltzer, M.
Analysis of paper.
Industrie Chimique 10, 298-301, 347-348 (July, Aug., 1923); Paper 32, No. 25, 3-6 (Oct. 11, 1923); C. A. 17, 3604; T. S. 77, 188.

Cameron, E. P.
Determination of the effect of pressure on the strength of test sheets in the strength testing of pulp.
Pulp Paper Mag. Can. 21, No. 5, 127-135 (Feb. 1, 1923); Paper Mill 47, No. 6, 14. 16, 18, 20, 28, 40 (Feb. 10, 1923); Paper Ind. 4, No. 12, 1685-1686, 1689-1692 (Mar., 1923); T. S. 76, 239.

Crolard, Jacques.
Rapid analysis of paper.
Paper 33, No. 7, 5-8; No. 8, 6-9, 19; No. 9, 6-7 (Dec. 6-20, 1923).

Curtis, F. A.
Mullen test comparison.
Paper Trade J. 76, No. 19, 48 (May 10, 1923); Tech. Assoc. Papers VI, 20 (1923); T. S. 77, 76.

Davis, Harold S.
Effects of temperature and humidity on the dimensions of paper.
Paper 31, No. 12, 7-8, 10 (Jan. 10, 1923); T. S. 76, 186; C. A. 17, 878.

Forensic Paper Chemistry.
Papeterie 45, 1057-1063 (Nov. 10, 1923); Pulp Paper Mag. Can. 21, 1239-1240 (Dec. 20, 1923); C. A. 18, 585.

Green's improved standard folding tester.
Paper Mill 47, No. 13, 10, 32 (Mar. 31, 1923); T. S. 77, 1.

Herzberg, W.
Experiments with the Mullen tester.
Mitt. Material prüfungsamt 1922, No. 5; Papierfabr. 21, No. 13, 180-182 (Apr. 1, 1923); Wochl. Papierfabr. 54, 770-772 (Mar. 17, 1923); T. S. 77, 1.

Herzberg, W.
Normal papers, 1923-1922.
Papier-Ztg. 48, 2130 (Oct. 24, 1923); Papierfabr. 21, 479 (Nov. 4, 1923).

Herzberg, W.
Simple paper testing procedure.
Mitt. Material prüfungsamt 9,—(1922); Papierfabr. 21, 343-346 (July 22, 1923); Wochl. Papierfabr. 54, 2404-2405 (Aug. 23, 1923); C. A. 17, 3917; T. S. 77, 236.

Herzberg, W.
Work of the German Bureau for testing materials: Paper testing.
Zellstoff u. Papier 3, 17-20 (Jan., 1923); T. S. 76, 186.

Houston, Paul L.
Effect of length and width of test specimen on the breaking strength and elongation of paper.
Paper Trade J. 76, No. 12, 54-55 (Mar. 22, 1923); Tech. Assoc. Papers VI. (1923); 72-73; T. S. 77, 1.

Houston, Paul L.
A quick test to determine the brittleness of paper.
Paper Trade J. 76, No. 15, 233, 235 (Apr. 12, 1923); Tech. Assoc. Papers VI, (1923); 117-118; T. S. 77, 1; C. A. 17, 2501.

Houston, Paul L.
Relationship between breaking strength and bursting strength of paper. Calibration of Mullen tester.
Paper Trade J. 76, No. 13, 47-48 (Mar. 29, 1923); Tech. Assoc. Papers VI, (1923); 100-101; T. S. 77, 1.

Houston, Paul L., Carson, F. T., and Kirkwood, R. S.
Effect of atmospheric humidity in the physical testing of paper.
Paper Trade J. 76, No. 15, 237, 239, 241, 243, 245, 247, 249, 251 (Apr. 12, 1923); Tech. Assoc. Papers VI, (1923); 64-71; C. A. 17, 2501; T. S. 77, 1.

Kiely, Helen U.
Report on Schopper folding machine.
Paper Trade J. 76, No. 19, 45-48 (May 10, 1923); Tech. Assoc. Papers VI, (1923); 97-100; T. S. 77, 76.

Lee, H. N.
Microscopical examination to determine fiber composition.
Paper Trade J. 76, No. 20, 45 (May 17, 1923); Tech. Assoc. Papers VI, (1923) 48.

Lee, H. N.
Microscopical analysis of paper by 18 investigators using different methods.
Paper Trade J. 77, No. 21, 51-52 (Nov. 22, 1923); C. A. 18, 586.

Lofton, R. E.
A measure of the color characteristics of white paper. Paper Trade J. 77, No. 18, 51 (Nov. 1, 1923); U. S. Bureau of Standards, Tech. Paper No. 244; part of vol. 17, 667-676 (1923).

Potts, T. Trevor.
Notes on the resistance of paper to tearing.
Papermakers' Assoc. Gt. Brit. Ireland, Proc. Tech. Sect., IV, pt. 1, 67-71 (1923); Paper Maker 65, 167-168 (Feb. 1, 1923); Paper Makers' Mo. J. 61, No. 2, 69-71 (Feb. 15, 1923).

Ravizza, V.
Determining the porosity of paper.
L'Ind. della Carta 2, No. 7, 49-51 (1923).

Reed, E. O., and Machmer, R. R.
Determination of the fiber content of paper.
Paper Trade J. 76, No. 17, 47-49 (Apr. 26, 1923); also published as a separate from the U. S. Government printing office, 1923, 6 p. T. S. 77, 1.

Schinkel, G.
The influence of atmospheric moisture on paper.
Wachbl. Papierfabr. 54, 2268-2272 (1923); C. A. 17, 3918; T. S. 77, 236.

Schultz, Karl A.
Why a chemist in a paper mill?
Paper Ind. 4, No. 12, 1697, 1701 (Mar., 1923).

Stevens, Henry P.
Manuel du chimiste papetier. (The paper mill chemist). Translated by Lhomme and Argy. La Papeterie, Paris, 1922, 364 p. Reviewed in Papier-Ztg. 48, 1216.

Strachan, James.
Use of the microscope in paper mills.
Pulp Paper Mag. Can. 21, No. 3, 57-60 (Jan. 18, 1923); Paper 31, No. 13, 7-10 (Jan. 17, 1923); T. S. 76, 240.

Sutermeister, E.
The Elmendorf tearing test and its relation to the bursting strength.
Paper Ind. 5, No. 3, 477-479 (June, 1923); T. S. 77, 161; C. A. 17, 2645.

Sutermeister, E.
Relative strength of sheet-machine and hand-mold sheets.
Paper Ind. 4, No. 12, 1661-1662 (Mar., 1923); C. A. 17, 1715; T. S. 76, 186.

Testing machine for jacquard stock.
Paper Trade J. 77, No. 4, 55 (July 26, 1923); T. S. 77, 188.

Vidal, L.
Micrographic analysis of a sample of writing paper.
Science et Industrie 7, No. 108, 21-23 (Jan. 31, 1923).

Vidal, L.
Micrography as the French school of Papermaking.
Science et Industrie 7, No. 108, 19-20 (Jan. 31, 1923).

Wells, Sidney D.
Influence of moisture on tests of container board.
Boxboard 2, No. 1, 14-17 (Jan., 1923); Fibre Containers 8, No. 1, 10-12 (Jan., 1923).

Wells, Sidney D.
Report of the paper testing committee on the tearing test of paper.
Paper Trade J. 76, No. 26, 49-54 (June 28, 1923); Tech. Assoc. Papers VI, (1923); 102-106; World's Paper Trade Rev. 80, 416 (Aug. 3, 1923); T. S. 77, 161.

Paper Machines

Arnould, E.
The breaking of the paper web in the papermaking machine.
Papier 25, 501-504 (Nov., 1922); Paper 31, No. 11, 7-8, 14-16 (Jan. 3, 1923); T. S. 77, 93.

Hoyer, —.
Modern long and cylinder cardboard and pasteboard machine.
Papierfabr. 21, No. 3, 33-37; No. 5, 61-63 (Jan. 21, Feb. 4, 1923); T. S. 76, 253.

Lambrette, A.
Papermachine designs.
Papeterie 45, 1094-1098, 1146-1150, 1200-1205 (Nov. 25, Dec. 10, 25, 1923).

Nuttall, T. D.
Recent developments in papermaking.
Paper Trade J. 76, No. 2, 45-48 (Jan. 11, 1923); T. S. 77, 93.

Orth, H. C.
Innovations in papermachine construction.
Zellstoff u. Papier 3, 62-63 (Mar., 1923); T. S. 77, 93.

Strauch, F.
Economy of high speed papermachines.
Papierfabr. 21, 23-27 (Jan. 14, 1923); T. S. 76, 253.

Sylvester, V.
Automatic tension regulator applied to a Leonard drive on a board machine.
Papeterie 45, 262-269 (Mar. 25, 1923); Papier 26, 335-343 (Mar., 1923).

Paper Manufacture—General

Clerc, J. F.
A new process for the production of pulp.
Schweiz. Tech. Ztg. 20, No. 9 (1923); Papierfabr. 21, 201-203 (1923); C. A. 17, 2502.

Enge, L.
Half cellulose.
Wochbl. Papierfabr. 54, No. 4, 245-246 (Jan. 27, 1923); Paper 31, No. 22, 11, 23 (Mar. 21, 1923).

Fournier, Raymond
Continuous cooking of vegetable materials under pressure
Papeterie 45, 270-274 (Mar. 25, 1923); Paper 32, No. 5, 5-6, 20 (May 23, 1923); C. A. 17, 2503.

Grossmann, A.
Compressed air stamping machine in the manufacture of pulp.
Wochbl. Papierfabr. 54, 1113-1114 (Apr. 21, 1923); T. S. 77, 95.

Grünewald, W., and **Sensehauser, G.**
Papierhandel. Ein Hilfsbuch für Papierhändler, -verarbeiter und -verbraucher. Berlin, Verlag der Papier Zeitung, 1923. $2.50.
Reviewed in Papier-Ztg. 49, 192.

Possanner, B.
Digestion and yield of pulp.
Zellstoff u. Papier 3, 131-134 (1923); Paper 32, No. 26, 3-6, 21 (Oct. 18, 1923); C. A. 17, 3251.

Puget, P.
La fabrication du papier. Paris, Baillière, 1923. 386 pp. Fr. 10.

Recknagel, A. B.
The forests of New York State.
Contains a chapter on the pulp and paper industry.
Reviewed in Paper Trade J. 76, No. 11, 56.

Schwalbe, Carl G.
Conversion of fibrous raw material to pulp and textile fibers.
Zellstoff u. Papier 4, 73-76 (Apr., 1923); C. A. 17, 2502; T. S. 77, 87.

Possanner, B.
Lehrbuch der chemischen Technologie des Papiers. 1923, 254 pp.
Reviewed in Papierfabr. 21, 406.

Sieber, R., and **Dierdorf, H.**
Leimen, Füllen, Färben des Papierstoff. Vol. 3 of Carl Hofmanns Praktisches Handbuch der Papierfabrikation. 3rd ed. Berlin, Hofmann, 1923. 124 p.
Reviewed in Papierfabr. 21, 285; World's Paper Trade Rev. 80, 454.

Valenta, Eduard.
Das Papier, seine Herstellung, Eigenschaften, Verwendung in den graphischen Drucktechniken, Prüfung usw. 2nd ed. Halle, Wm. Knapp, 1922.
Reviewed in Papier-Ztg. 48, 12 (1923).

Waentig, P.
Disintegration and refining of plant fibers.
Zellstoff u. Papier 3, No. 1, 1-7 (Jan., 1923); Papierfabr. 21, No. 4, 49-53 (Jan. 28, 1923); Wochbl. Papierfabr. 54, No. 1, 23-25 (Jan. 6, 1923); C. A. 17, 1328.

Whiting Paper Co.
How paper is made 20 p., ill. 1923.

Paraffin Papers

Grünewald, W.
Wax paper for packing hygroscopic tablets.
Zellstoff u. Papier 4, 87-88 (Apr., 1923); T. S. 77, 67; C. A. 17, 2504.

Making fat-impervious papers.
Paper 32, No. 13, 7-8 (July 18, 1923).

Müller, Fritz.
Paraffin papers.
Papierfabr. 21, No. 28, 330-331 (July 15, 1923).

Strachan, James.
Manufacture of paper for wrapping and containing foodstuffs.
Paper Mill 47, No. 19, 34, 46 (May 12, 1923); T. S. 77, 66.

Parchment Papers

Herzberg, W.
Parchment paper.
Papierfabr. 21, 421-422 (1923); C. A. 18, 467.

Postl, H.
Parchment and imitation parchment.
Paper 32, No. 10, 11-12 (June 27, 1923).

Treated parchment paper as a substitute for goldbeater's skins.
Papier-Ztg. 48, 972 (1923); C. A. 17, 2504.

U. S. Tariff Commission.
Tissue, bibulous and filter paper, parchment paper and imitation parchment paper, parchment and vellum.
Tariff Information Surveys on the articles in Paragraph 323 (324 and 568) of the Tariff Act of 1913. Revised ed. M-3. 1923. 34 p. Washington, Govt. print. off.

Peat

Lambrette, A.
Paper and cardboard from peat.
Papeterie 44, 781-786, 921-925, 962-969, 1073, 1109-1113, (Sept. 10, Oct. 25, Nov. 10, Dec. 10, Dec. 25, 1922); 45, 19-22, 158-165, 314-318 (Jan. 10, Feb. 25, Apr. 10, 1923); C. A. 17, 2503; T. S. 77, 86.

Peat as a raw material for paper.
Paper Ind. 5, 1397-1398 (Dec., 1923); C. A. 18, 585.

Phenol Process

Legeler, Eberhard.
Decomposition of wood by means of phenol.
Cellulosechemie 4, 61-62 (July 29, 1923); C. A. 17, 3249; T. S. 77, 236.

Photographic Papers

Hitchens, Alfred B.
Peculiarities of photographic papers.
Paper Mill 47, No. 15, 218, 220 (Apr. 14, 1923); Paper 32, No. 1, 5-6, 21 (Apr. 25, 1923); T. S. 77, 47.

Raw photographic stock.
Science et Industrie 7, No. 108, 126-127 (Jan. 31, 1923).

Why is photographic paper coated with baryta?
Science et Industrie 7, No. 108, 127-128 (Jan. 31, 1923).

Power

Brownlie, David.
Fuel Economy in efficient steam production.
Papier 26, 1285-1288, 1411-1414 (Nov. Dec., 1923).

Childs, Sterry H.
Finding steam losses from steam costs.
Paper Trade J. 76, No. 20, 52-54, 56 (May 17, 1923).

Chorlton, F. O. L.
Choice of prime movers for paper mills.
Pulp Paper Mag. Can. 21, No. 17, 425-430 (Apr. 26, 1923).

Darling, A. G.
Steam turbine application in pulp and paper mills.
Paper Trade J. 77, No. 24, 56-60 (Dec. 13, 1923); Paper 33, No. 9, 10-12 (Dec. 20, 1923); Paper Mill 47, No. 47, 12, 46 (Nov. 24, 1923); Paper Ind. 5, No. 9, 1451-1453, 1455 (Dec., 1923).

Economic boiler operation and care of boilers during operation and shut downs.
Papeterie 45, 886-890 (Sept. 25, 1923).

Emanaud, E.
Steam accumulators.
La Technique Moderne, Apr., 1923; Chem. Met. Eng. 29, 149-152 (1923); Paper Trade J. 77, No. 6, 47-50 (Aug. 9, 1923); Pulp Paper Mag. Can. 21, No. 31, 767-770; No. 32, 795-796; No. 33, 817-818; No. 34, 841-842 (Aug., 1923).

Ferguson, John F.
The power system—prime movers.
Paper Ind. 5, No. 6, 933-936 (Sept., 1923).

(*To be continued*)

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

BUDGETARY CONTROL*

While the term "budget" as representing the annual estimates which are brought down for the consideration of Parliament is one that is well known in British finance, the application of the principles of Budgetary Control to commercial undertakings is comparatively of recent date.

As the ramifications of the subject are very extensive it must be apparent that to keep within the limited scope of this publication I can only deal with the broader principles and aspects of the subject. Therefore, only the general principle of Budgetary Control in relation to all the principal activities of an enterprise which apply with equal value to any business whether manufacturing, trading merchandising, will be outlined.

Let us consider budgetary control under the following principal divisions:

1—Advantages to be gained by operating under a budget.
2—Preparation of the Budget.
3—Control.

Advantages to Be Gained by Operating Under a Budget

Budgetary control produces the following benefits to an enterprise:

1—Definite standards and goals.
2—Co-ordination of all activities.
3—Control of expenses.
4—Control of investment, merchandise, receivables and additions to plant.
5—An estimate of financing requirements.
6—An estimate Balance Sheet and Profit and Loss Statement at the end of the budget period.

Definite Standards and Goals

As the chart and compass is to the mariner, so is the budget to the business executive. When compiled with care and foresight (and a budget prepared otherwise is worse than useless) it is a guide and standard by which the activities of the business can be studied from month to month. It has a special advantage in that it provides a stimulus to the heads of all departments, and all down the line of organization, to put forth the best efforts, not only to accomplish the program set for performance, but to exceed it by the greatest possible margin. The realization of the budget which has been set for each department head gives him a definite mark at which to aim and is a definite measure of what the executive expects of him. Furthermore, it gives a department head an opportunity to plan his organization to the best advantage, knowing that to a considerable degree his administration will be judged by the manner in which his responsibility is fulfilled and his budget is met. The executive officer on the other hand is relieved of a great deal of detailed supervision, and he has some concrete standard which he expects each department head to live up to. In case anyone of his department heads does not live up to his budget, the fact is brought before the executive before the situation can possibly become serious.

The budget forms the basis for a revision of plans when changing conditions make a revision necessary. Unless the management has some guide by which to gauge the concern's progress, it will not be able to tell at once when a change in plans is desirable, and as a consequence losses or misdirected efforts must result.

Co-ordination of Activities

A system of budgetary control is the best factor that can be devised to bring about the co-ordination of a business to the fullest degree. It is impossible to draw up a budget that is worthy of the name without holding many conferences on the subject and all departments must work toward the one end. Without such control it is quite possible that one department will work more or less at a tangent and the results that would be obtained would naturally be more or less unbalanced. Under budgetary control, for example, the Manufacturing Department is enabled to plan for the output required by the estimated sales in such a way as to result in the greatest possible economy. In this way, standard lines of output can be run through in economical quantities instead of in smaller lots, and consequently costs can be kept on a uniformly low basis. On the other hand the estimates of sales may require the production for the budget period to be curtailed so that large inventories may not be piled up in excess of the normal requirements of the business.

The Financial Department can plan the expenditure and receipts just as carefully as the Sales Department plans sales or the Manufacturing Department plans production. By this means it is possible to prepare for financial requirements in advance of actual needs. This makes it necessary that the appropriations of the budget be closely followed.

The Control of Expenses

Preparation of a budget makes it practicable for the expenses of each department for the budget period to be determined on a basis commensurate with the volume of sales and production anticipated. The expense budgets of each department should be drawn up, of course, by having regard, first of all, to the functions of the specific department, and the estimated volume of business to be done during the budget period. The expense budget when finally approved may

* From National Association of Cost Accountants Bulletin.

be considered as a definite authorization to the department head to make the expenditures covered by his budget, and enables him to plan the organization and operation of his department for the budget period to the greatest possible advantage.

Control of Investment

(a) Proper Control and Planning for Productive Capacity—

The anticipated volume of sales, of course, will have to be considered by the Manufacturing Department in the first instance from the point of view of productive capacity. If the estimated sales demand production in excess of the capacity either of the plant or space, it becomes necessary immediately to consider whether under existing business conditions, or the conditions peculiar to the specific business, it is advisable to make the necessary extensions and expenditures to provide for the increased output.

(b) Merchandise Investment

From the estimated sales and the relative output of product required, the investment in raw materials, process goods and finished stock, required from month to month, can be easily ascertained from the predetermined standards which have been set for such investment. The principle applies equally well in the case of a manufacturing and merchandising business, or in a merchandising business only, and in my opinion no feature of budgetary control is more necessary to profitable operation.

(c) Receivables

Standards for a given number of days' receivables allowable are also required to provide a measure of the efficiency of the collection of accounts receivable.

Provision for Financial Requirements

The preparation of the sales and manufacturing expenses and capital expenses and capital expenditure, budget, of course, supplies the Accounting Department with the necessary information upon which to base the estimated receipts and payments of the business so that the Department will be in a position to advise the management as to whether the estimated business can be handled without increase of capital, having regard to the banking and other credit facilities of the company.

Estimated Profit and Loss Statement and Balance Sheet

The division of the budget into the revenues and expenditures of the business permits of an estimated statement of Profits and Losses for the period under consideration, and a Balance Sheet for the end of that period being prepared. Of course, such statements are of considerable use to the management in laying the plans for the operation of the business during the budget period, as follows:—

intelligently for the future, and that a large percentage of business failures is directly traceable to neglect in anticipating financial needs in time to provide for them. Construction work, provision for the expansion of business, increased sales, rising costs of production, etc., must be anticipated and provided for before they actually arise. The diversification of industry and the constantly increasing necessity of depending upon indirect supervision and management, together with rapidly changing business conditions necessitate the use of scientifically prepared forecasts.

Preparation of the Budget

(a) Length of The Budget Period

The length of the budget period naturally depends upon the type of business for which the budget is being prepared. Where the nature of the business requires an extended period of manufacture from the purchase of raw material until completion of the final product, it is essential to plan ahead for a considerable period. For example, in the case of all business which utilize the products of the forest, where it may take one, two or even three years for the logs to be driven from the point of cut to the mills, it is necessary to formulate plans for an extended period. The same condition applies in the leather business and in the case of the Company with which I am associated.

However, it will be found that the most practical period for ordinary budget statements is the fiscal year of the Company concerned. In many cases it is considered advisable to adjust the budget for varying conditions which happen throughout the year.

(b) Responsibility of Budget Preparation—

The figures required for the budgets covering the various activities of the departments should be prepared by the department head responsible for the operation of the section to which these figures apply. Such department head, being naturally closest to the conditions and having a direct personal interest in the performance, is unquestionably more fitted to establish the correct figures than anyone not quite so close to the field of activity. The figures submitted by each department should be supervised by the general head of that department.

The control of all budget operations should clear either through the Budget Committee or the chief accounting officer of the Company, who will see that the figures of each department's budget properly co-relate with those of the other departments.

(c) Approval—

The approval of the budget when finally checked by the Accounting Department should be given by the President, and where the Company regulations require, by the Board of Directors.

(d) Sales Budget—

The first step towards the preparation of the general budget

MONTHLY STATEMENT OF PROFIT AND LOSS

	Month of	Per cent of Sales	Previous Month	Per cent of Sales	Months this Year	Per cent of Sales	Budget Same Period this Year	Per cent of Sales	Months Previous Year	Per cent of Sales	
Sales	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Profits Estimated—											
Gross profits	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Expenses—											
Distributing houses	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
General department	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
Total expenses	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
Net profits on sales	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6
Interest received	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7
Interest paid	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8
Net profits before deducting income tax	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9
Income tax	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..
Net profits	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10
Per cent earned on total capital	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11
(b) Before deducting interest charges	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12
Orders on hand	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13

(b) Based on capital stock, average bonds outstanding, average surplus and undivided profits and average bank and other loans for period.

The value and use which can be made of these estimates is evident when we realize that the success of a business enterprise is dependent chiefly upon the ability of the management to plan

must necessarily be to obtain the sales estimate for the budget period from the Sales Department. The difficulties attendant on the preparation of the budget are governed, of course, by the type of

product manufactured, the question of fluctuating markets, multiplicity and question of standardization of products and the seasonable fluctuations which apply to the particular type of business.

The first step towards the preparation of the Sales budget is to have each salesman survey the possibilities in his territory, and prepare an estimate of the sales which he computes can be obtained from it during the ensuing budget period. These preliminary estimates should be gone over by the department head in the office to whom the salesman reports and any corrections and amendments which he considers necessary should be made. The estimate sales of "Key" items will be found to be a valuable aid in the preparation of the general sales budget. Such items frequently point out where sales efforts may be directed to produce greater results.

When the sales budget has been finally determined upon, it forms the basis for the estimate of the Manufacturing Department's budget for the ensuing year. The sales budget, therefore, should be forwarded to the Accounting Department where the estimated rates of gross profits should be applied and the estimated output of the factory obtained.

(e) Manufacturing Department Budget—

The figures of estimated output required as submitted by the Accounting Department to the Manufacturing Department, are reviewed by the Manufacturing Department to ascertain:—

1—If the required budget can be manufactured during the budget period with the plant and equipment then existing.

2—If the quantity required by the Budget cannot be produced with the plant and equipment then available, it will be necessary to confer with the Sales Department to find out whether or not the plant should be increased. In case the Sales Department think that from their point of view there is sufficient cause for an increase in plant, an estimate of the cost of such increase must be prepared and forwarded through the regular channels for the necessary approval.

3—If the necessary raw materials can be obtained to provide for the manufacture of the required output within the budget period.

As soon as the Manufacturing Department has determined that the budget submited by the Sales Department can be carried out by them, it becomes necessary for them to translate the general budget in a schedule of manufacturing output which will enable the Manufacturing Department to deliver for distribution the quantities of the various products at the intervals required by the Sales Department. Due regard, of course, must be had to the necessity of maintaining minimum stocks which have to be maintained to give the necessary service for customers' requirements.

The Manufacturing Department will be enabled to place its orders in such quantities as to permit of the most economical manufacture possible, and from this point of view it may be necessary in certain cases to create temporary overstock of certain products, rather than manufacture small lots at excessive costs.

This factor of quantity production, of course, is of weighty consideration where the cost output includes heavy setting up charges or adjustment of machinery, such as in the case of special cables or in the case of the various sizes of rolled steel products.

The principle of budgetary control should be carried where at all practicable into the control of the materials required for each particular class of output. Where standard practice does not exist, as for example in steel mills, past experience will be a very ready guide, as to the quantity of raw materials which should be required for each class of output.

(f) The Manufacturing Department Expense—

The departmental expense of the Manufacturing Department should also be budgeted so that the Superintendent may have a guide by which to judge the cost of administration of the various departments by respective performances.

It is apparent, of course, that the expenses of the Manufacturing Department are not directly proportional to the output, as of course, fixed charges in the nature of rent, general supervision, depreciation, etc., have to be met irrespective of the volume of output.

Variable charges have a direct relationship to the volume of production, so that it is a comparatively easy matter from past experience, to draw up percentages of expense to output of the various departments which would apply according to the percentage that the output bears to capacity.

(g) Distribution and Administrative Expense—

As one of the principal advantages of preparing budgets of administrative and distributive expense is the control of such expenses, it is very necessary that proper classification of accounts be maintained, to permit of various expenses of the Company being properly allocated so that the various department heads can prepare properly the expense budgets and account for the expenditures of the various activities for which they are reponsible.

Under these circumstances it is of distinct advantage to have these expenses classified in the first instance, in accordance with the chart of organization, so that the various expenses for which each general department head is directly responsible, or which apply to the functions of his department, may be classified under one group.

In the first instance the direct expense of his department, would apply, while such other general expenses of the Company which have distinct relation to the duties of the department head, should also be classified in his expense. For the sake of convenience, it is suggested that each department bear a number so that all expenses are first of all classified under that number. This may be illustrated as follows:

1—President or General Manager.
10—Secretary.
20—Treasurer.
30—Accounting.
40—Sales. (Includes sales distribution and merchandising).
50—Manufacturing.

A further detailed classification of expense is necessary and for simplicity in accounting it would seem to be advisable that the sub-classification of expense bear the same sub-classification number irrespective of the department to which such expenses apply. For example, traveling expenses would bear the same sub-classification number irrespective of the department by which such traveling expenses were incurred, the distribution being made by prefixing the department number before the sub-classification of the particular expense incurred.

When the Sales, Manufacturing and Expense budgets have finally been checked up by the Accounting Department, it is then possible to prepare an estimated statement of profit and loss for the year, based upon the budget figures submitted, and from the budget estimates of the number of day's merchandise and receivables which would be set up, it is possible to prepare an estimate balance sheet at the end of the fiscal period, after taking into account any requirements for additional plant, sinking fund, dividend payments, etc. From this estimated balance sheet can be ascertained approximately what the general financial position of the company will be throughout the year, making due allowance for periods, of peak production and merchandise investment caused by seasonal and other factors, so that the general financial program of the company can be determined upon.

The complete budget statements, when thus prepared, should be submitted to the management with explanatory statements where necessary for their consideration and final approval.

(h) Financial Forecast—

Two problems present themselves in connection with financial budgetary control.

1—The broad viewpoint or general financing required for the budget period.

2—The ordinary month to month or day to day financing.

The estimated balance sheet prepared as at the end of the budget period in the manner outlined above, after taking into consideration the peak investments in merchandise and receivables, will give the amount of additional capital to be provided, if any. After due consideration as to the future possibilities and plans of the company,

the method of providing the necessary money, either by additional stock, bonds or through banking and credit facilities, will be decided upon. In this way the management will have provided for their general financial arrangements for the ensuing year.

In order that the treasurer may be in a position to economically arrange for his financing from month to month, a monthly forecast of receipts and expenditures should be prepared giving the estimates of expenditures under the various main classifications of expenditure, such as purchases, wages, freight and duty, plant, etc. These are submitted by the various departments responsible to the Accounting Department who check them over and prepare the necessary statement for submission to the Treasurer's Department not later than the 10th of the month.

Control of the Budget

When once the budget has been prepared and approved provision must be made so that the executive may at all times throughout the budget period be in a position to know exactly how the actual results compare with the budget. The reports should be in sufficient detail to present a true picture but should avoid unnecessary detail or their true purpose may easily be defeated. The usual monthly reports of the company's activities, such as sales, expenses of each department, expenses of manufacturing operations, etc., should all be prepared so as to show in comparative columns the actual expenses for the month and the period of date together with the corresponding figures called for by the budget. In some cases it may be advisable to use percentages of realization of the budget rather than to show the actual detail figures.

In cases where the demand for the company's products have wide seasonal fluctuations it is essential that due allowance for this factor be made when dividing the annual sales budget into months for comparative or checking purposes. This factor can be obtained by a study of the sales by months of the preceding few years. When these factor figures are applied to the sales budget, the result will be the expected sales by months during the term of the budget.

It may be found advisable to prepare expense statements on a similar basis, although, it is generally found more convenient and satisfactory to divide the expense budget by 12 to arrive at the monthly quota.

A successful budget pre-supposes an efficient Accounting Department. All transactions come under the scrutiny of this department, and here all expense items are classified and all sales placed in their respective sales class. A budget should not be adhered to slavishly or without intelligence. It is a forecast and a chart for the guidance of the executive and his staff. One of its chief advantages lies in the fact that it gives its own signal when it ought to be revised to meet changing conditions. Then the budget itself forms the basis for the revision. Usually the first indication of the necessity for budget revision comes from the Sales Department which is the most sensitive part of the organization and the first to feel a change in business conditions.

Conclusion

This article is a general outline of how a business may be controlled under a budget system. No attempt has been made to give more than a general outline of the system. It is not contended that a system of budgetary control will take the place of those qualities on which all successful business is built, viz: foresight, judgment and executive ability. However, it does assist greatly in relieving the executive of the weight of detail and it is one of the best means to develop junior executives. The benefits of budgetary control may be again briefly summarized as follows:

1—Provides a definite plan and standard.

2—Provides for co-ordination of the activities of each department.

3—Provides for control of expenditures.

To these we might add the training and development of the department heads. This training is bound to follow the increased responsibility which they assume under the system.

There is no more useful instrument in the hands of capable and efficient management which can more assist that management in carrying out its functions and in planning for and measuring the results to be desired than a budget system.

Program for Cost Convention

Judging from present indications the convention of the Cost Association of the Paper Industry at the Lawrence Hotel at Erie, Pa., May 19-21, will be unusually well attended. Those who expect to attend are specially urged by the secretary to make their reservations early.

The complete program is as follows:

MONDAY, MAY 19

10-11 A. M.—Registration.

11-12 A. M.—Roll Call and Get Together.

12 Noon—Buffet Luncheon. Address of Welcome by Vice-President, Norman Wilson, of Hammermill Paper Company.

1:30 P. M.—"Accurate Accounting—What it Means to the Pulp and Paper Industry," by James A. Reilly, President, Cost Association of the Paper Industry.

2:30 P. M.—"Fixed Assets as Influencing Correct Manufacturing Costs," by L. H. Olson, American Appraisal Company. Discussion.

3:30 P. M.—Business Meeting; Financial Report; Report on Tax Work; Open Forum.

TUESDAY, MAY 20

Morning Session

9:45 A. M.—"What Comparative Statements Mean to Industries," Alexander Wall, Secretary-Treasurer, The Robert Morris Associates. Discussion.

11:00 A. M.—"Budgets, Their Construction and Use," G. E. Frazer, C. P. A., Frazer & Torbet, Chicago. Discussion.

Afternoon Session

2:00 P. M.—"Purchase Discounts," H. F. Farrington, C. P. A., Howard Farrington & Co., New York. Discussion.

3:00 P. M.—Visit to Hammermill Paper Company's Mill.

6:30 P. M.—Banquet. Chairman, President James A. Reilly. Speakers: Commissioner Nelson B. Gaskill, Federal Trade Commission, Washington, "Selling Below Cost." Nelson R. Davis, President, American Pulp & Paper Mill Superintendents' Association, "The Value of Cost Statistics to Superintendents." Entertainment.

WEDNESDAY, MAY 21

Morning Session

9:45 A. M.—Seth L. Bush, Manager of Research, Crocker-McElwain Company and Chemical Paper Mfg. Co., "Labor Losses—How They Can Be Cut." Discussion.

11:00 A. M.—Hugo Diemer, Director Industrial Courses, La Salle Extension University, "The Kind of Cost Figures the President Wants." Discussion.

Afternoon Session

2:00 P. M.—Fred S. Smith, President, Smith Insurance Service, Inc., Boston, Mass., "How to Avoid Insurance Intricacies and Save Money." Discussion.

3:15 P. M.—S. F. Fannon, Sherman Service, Inc., "Dividends and Payrolls or Why Profits Are Not Larger." Mr. Fannon will present in full his industrial analysis, which has attracted widespread attention in other cities. Discussion.

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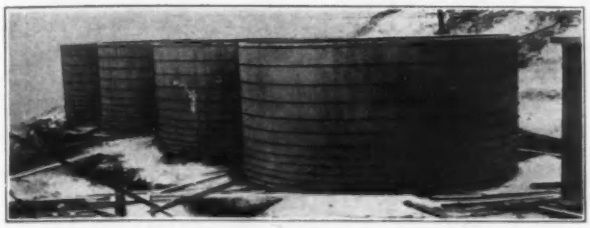

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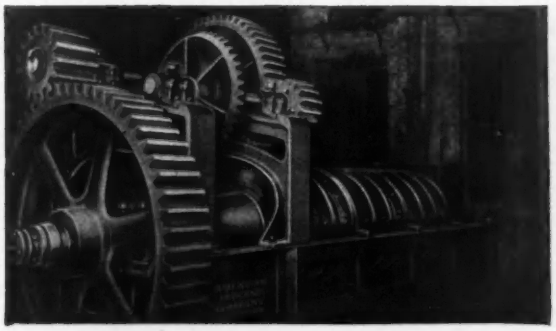

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EFFECT OF THE WEIGHT OF THE NEEDLE OF THE MULLEN PAPER TESTER UPON THE BURSTING STRENGTH TEST*

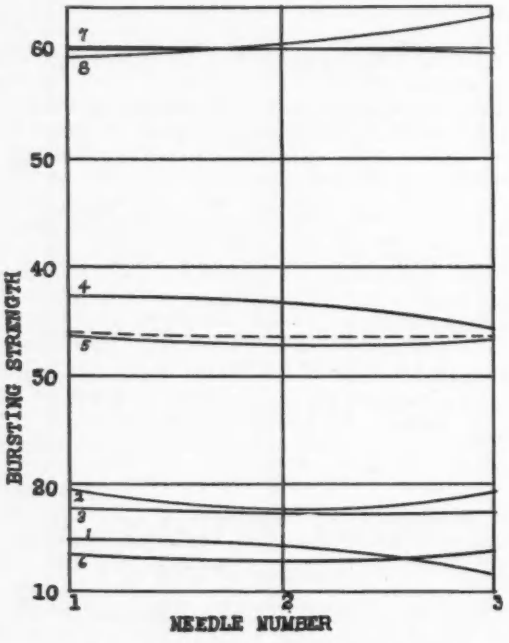
By R. E. Lofton and C. J. Costello[1]

I. Introduction

While it seemed improbable that small differences in weight of the needles of the Mullen Paper Tester gage cause variations in the results of bursting strength tests of paper, it was thought advisable to obtain definte data on the subject as there has been some question regarding possible effects.

II. Procedure

The Mullen tester used was of the ordinary type in which the paper is clamped against a rubber diaphragm through which pressure is applied to the paper on a circular area of approximately one square inch. The pressure is produced by a plunger attached to a hand-wheel and connected to a piston which forces glycerine through a chamber against the rubber diaphragm. The bursting point of the paper is registered on the gage referred to above.



Relation Between Bursting Strength and Weight of Needle

Needles of three different weights were used. One was the standard needle supplied with the instrument, weighing 0.953 grams. Two other needles of exactly the same form were made, weighing respectively 0.633 and 1.472 grams. The same gage was used throughout the tests, and was calibrated for each needle before use, with a dead-weight pressure gage tester.

Eight samples of paper, representative of as many different lots, and ranging in weight from thirty-five to eight-six pounds, for a ream of 500 sheets, 25 x 40 inches, were selected for test. These consisted of writing, printing, and kraft wrapping papers. Before being tested, each sample was conditioned for two hours in an atmosphere of sixty-five per cent relative humidity. Each sample was tested 10 times with each of the three different needles.

III. Results

The results obtained with the different needles were found to agree very closely; well within the usual limits of error allowed for tests obtained with this instrument. Averages were compiled which are given in the following table:

Mullen Tests Obtained With Gage Needles of Different Weights

Sample No.	Description of Paper: Kind	Weight, 25×40, 500 Pounds	Needle No. 1 Wt., 0.633 Grams, Points	Needle No. 2 (Standard) Wt., 0.953 Grams, Points	Needle No. 3 Wt., 1.472 Grams, Points
1	White writing	35	15.0	14.4	11.7
2	White writing	35	19.5	17.8	19.4
3	Book	42	17.7	17.3	17.4
4	Kraft wrapping	55	37.4	36.8	34.3
5	White writing	64	33.8	32.9	33.3
6	Book	71	13.5	13.0	13.9
7	Fine writing	83	60.2	60.0	59.6
8	Fine writing	86	59.3	60.4	63.3
	Average		32.1	31.6	31.6

The graphs show the relation between bursting strength and weight of needle. While the graphs considered separately seem to indicate that the weight of the needle is a factor in the determination of results, this is shown to be not the case from the dashed graph which is a composite of the eight tests of each needle. Each point on the graphs is the average of ten tests, while each point on the composite graph is the average of eighty tests. It is evident, therefore, that if each point of the eight numbered graphs had been determined from eighty tests, each graph would approximate a horizontal line, as does the composite graph. This demonstrates that variations in the weights of the needles do not effect bursting strength tests.

IV. Conclusions

As the range of weights of the experimental needles was much greater than would actually occur in the process of manufacture, and in view of the close agreement of the results obtained, it is evident that the variation in weight of the needles supplied with the instruments does not impair the bursting strength test results.

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*Published by permission of the Director of the Bureau of Standards, U. S. Department of Commerce, Washington, D. C.

[1]Associate Physicist and Laboratory Assistant, Bureau of Standards.

cf D. C. Douty, Paper Testers; Paper Trade Journal, 50, No. 6, 259, February 10, 1910.

D. C. Douty, Conditions Which Inuence the Bursting Strength of Paper; Paper Trade Journal, 50, No. 6, 271, February 10, 1910.

Old Employes Get Service Pins

[From our regular correspondent.]

Rockville, Conn., May 13, 1924.—A "service recognition dinner" was held Saturday night last at the Rockville Hotel at which 47 employees of the White, Corbin & Company division of the United States Envelope Company were presented by James Logan of Worcester, President and General Manager of the company with handsome service pins.

About 175 attended the dinner including a delegation of officials from Worcester. Manager Edward W. Burke of the local plant gave the welcoming address and presented Fred W. Chapman, Superintendent of the plant as the toastmaster of the evening.

The 47 employees recognized have served terms varying from 15 to 57 years and their terms of service added together amount to 1,382 years. Two of the pins presented were diamond studded and were presented to Miss Annie Blake who has been in the service of the company for 57 years and to Edwin H. Woodford who has been in the service 53 years.

Imports and Exports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING MAY 10, 1924

SUMMARY

News print.....897 rolls, 30 bls.
Printing paper..529 rolls, 407 bls., 190 cs., 17 pgs.
Wall paper.....24 cs., 29 bls.
Filter paper.....128 bls., 16 cs.
Packing paper.....8,527 rolls, 356 bls., 30 cs.
Wrapping paper.....189 rolls, 30 cs., 89 bls.
Drawing paper.....2 cs.
Cigarette paper.....26 cs.
Surface-coated paper.....447 cs.
Writing paper..... 4 cs.
Tracing paper..... 14 cs.
Basic paper..... 10 cs.
Straw paper.....310 rolls
Paper hangings.....21 bls., 3 cs.
Transparent paper.....11 cs.
Tissue paper.....16 cs.
Copy paper..... 1 cs.
Colored paper.....41 cs.
Photo paper..... 2 cs.
Metal paper..... 5 cs.
Miscellaneous paper,
389 cs., 149 rolls, 12 bls., 461 pgs.

CIGARETTE PAPER

P. J. Schweitzer, Paris, Havre, 26 cs.

PAPER HANGINGS

W. H. S. Lloyd & Co., Adriatic, Liverpool, 1 bl.
A. C. Dodman, Jr., Inc., by same, 4 bls.
A. C. Dodman, Jr., Inc., Cedric, Liverpool, 1 bl.
W. H. S. Lloyd & Co., by same, 1 bl.
W. H. S. Lloyd & Co., Minnetonka, London, 14 bls.
W. H. S. Lloyd & Co., by same, 3 cs.

WALL PAPER

W. H. S. Lloyd & Co., Minnetonka, London, 2 cs.
W. H. S. Lloyd & Co., by same, 3 bls.
R. F. Downing & Co., by same, 2 bls.
A. C. Dodman, Jr., Inc., Menominee, Antwerp, 2 bls.
A. C. Dodman, Jr., Inc., Berengaria, Liverpool, 5 bls.
A. C. Dodman, Jr., Inc., by same, 5 cs.
F. J. Emmerich Company, by same, 1 cs.
F. J. Emmerich Company, by same, 1 bl.
Whiting & Patterson, Inc., by same, 16 cs.
Globe Shipping Company, Stuttgart, Bremen, 2 bls.
F. A. Bender, by same, 14 bls.

NEWS PRINT

Parsons & Whittemore, Stuttgart, Bremen, 298 rolls.
C. B. Hewitt, by same, 24 rolls.
Janeway & Carpender, by same, 170 rolls.
H. Reeve Angel & Co., Inc., by same, 30 bls.
Drinhausen Hollkott Paper Company, Hansa, Hamburg, 90 rolls.
M. Gottesman & Co., Inc., Veendam, Rotterdam, 186 rolls.
Chemical National Bank, Huronian, Hamburg, 129 rolls.

PRINTING PAPER

Hudson Trading Company, Huronian, Hamburg, 17 pgs.
H. Hollesen, Stuttgart, Bremen, 44 bls.
J. P. Heffernan Paper Company, by same, 302 bls.
P. C. Zuhlke, Menominee, Antwerp, 145 cs.
Steffens Jones & Co., Missouri, Antwerp, 8 cs.
P. C. Zuhlke, by same, 20 cs.
B. F. Drakenfeld & Co., Adratic, Liverpool, 17 cs.
Drinhausen Hollkott Paper Company, Hansa, Hamburg, 47 bls.
International Acceptance Bank, by same, 340 rolls.
J. H. Scott Paper Company, by same, 189 rolls.
J. H. Scott Paper Co., by same, 14 bls.

WRAPPING PAPER

F. C. Strype, Hansa, Hamburg, 13 cs.
C. K. MacAlpine & Co., by same, 89 bls.
Republic Bag & Paper Company, Kofoku Maru, Hamburg, 189 rolls.
F. C. Strype, Menominee, Antwerp, 12 cs.
Gallagher & Ascher, Minnetonka, London, 5 cs.

PACKING PAPER

Republic Bag & Paper Company, Eastern Victor, Rotterdam, 6,074 rolls.
Republic Bag & Paper Company, by same, 188 bls.
Wilkinson Bros. & Co., Inc., by same, 113 bls.
Wilkinson Bros. & Co., Inc., by same, 25 cs.
Wilkinson Bros. & Co., Inc., by same, 2,288 rolls.
Hudson Trading Company, by same, 165 rolls.
Birn & Wachenheim, by same, 11 bls.
Hensel Bruckman & Lorbacher, Veendam, Rotterdam, 5 cs.
Martin Walsh, Inc., by same, 44 bls.

SURFACE COATED PAPER

P. C. Zuhlke, Missouri, Antwerp, 131 cs.
Gevaert Company of America, by same, 7 cs.
Gevaert Company of America, Menominee, Antwerp, 67 cs.
P. C. Zuhlke, by same, 157 cs.
Globe Shipping Company, Stuttgart, Bremen, 85 cs.

BASIC PAPER

Globe Shipping Company, Stuttgart, Bremen, 10 cs.

TRACING PAPER

Globe Shipping Company, Stuttgart, Bremen, 13 cs.
E. Dietzgen & Co., Kofuku Maru, Hamburg, 1 cs.

STRAW PAPER

A. Vuyck, E. Victor, Rotterdam, 310 rolls.

TRANSPARENT PAPER

W. Wrigley, Jr., Co., Missouri, Antwerp, 11 cs.

TISSUE PAPER

F. C. Strype, Adriatic, Liverpool, 4 cs.
Brooks Paper Company, by same, 6 cs.
Brooks Paper Company, Cedric, Liverpool, 6 cs.

COPY PAPER

E. Dietzgen & Co., Cedric, Liverpool, 1 cs.

COLORED PAPER

C. W. Williams, Menominee, Antwerp, 20 cs.
S. Langsdorff Company, Hansa, Hamburg, 8 cs.
Tanna & Co., by same, 13 cs.

FILTER PAPER

Scientific Materials Company, American Trader, London, 1 cs.
E. Fougera Company, Roussillon, Bordeaux, 103 bls.
H. Reeve Angel & Co., Inc., by same, 25 bls.
H. Reeve Angel & Co., Inc., Minnetonka, London, 15 cs.

DRAWING PAPER

H. Reeve Angel & Co., Inc., Minnetonka, London, 2 cs.

PHOTO PAPER

T. F. Wilmot & Co., Minnetonka, London, 2 cs.

METAL PAPER

Stone & Downer, Huronian, Hamburg, 5 cs.

WRITING PAPER

Ceenca Morrison & Co., Suffren, Havre, 4 cs.

PAPER

C. H. Boulin, Suffren, Havre, 40 cs.
H. D. Catty & Co., by same, 1 cs.
Perry Ryer & Co.,, Cameronia, Glasgow, 183 cs.
P. H. Petry & Co., by same, 135 rolls.
M. O'Meara Company, Hansa, Hamburg, 12 bls.
M. O'Meara Company, Veendam, Rotterdam, 461 pgs.
C. G. Keferstein, Kofuku Maru, Hamburg, 14 rolls.
Hensel Bruckman & Lorbacher, by same, 10 cs.
Whiting & Patterson, Inc., Paris, Havre, 51 cs.
A. Flinn & Co., by same, 4 cs.
Du Pont Cellophane Company, by same, 21 cs.
Abraham & Strauss, by same, 3 cs.
Gimbout Freres, by same, 70 cs.

RAGS, BAGGINGS, ETC.

Katzenstein & Keene, Inc., Valfiorita, Marseilles, 290 bls. rags.
Goldman Sachs & Co., by same, 71 bls. rags.
E. J. Keller Company, Inc., by same, 210 bls. rags.
E. J. Keller Company, Inc., Roussillon, Bordeaux, 62 bls. rags.
E. J. Keller Company, Inc., Missouri, Antwerp, 110 bls. flax waste.
E. J. Keller Company, Inc., by same, 54 bls. jute waste.
E. J. Keller Company, Inc., Rhine Maru, Algiers, 51 bls. rags.
Guaranty Trust Company, Rhine Maru, Genoa, 75 bls. rags.
Guaranty Trust Company, Cameronia, Glasgow, 56 bls. rags.
American Express Company, by same, 45 bls. rags.
Equitable Trust Company, by same, 143 bls. rags.
Brown Brothers & Co., by same, 37 bls. rags.
E. J. Keller Company, Inc., Suffren, Havre, 101 bls. bagging.
Equitable Trust Company, by same, 71 bls. bagging.
Kidder Peabody Acceptance Corporation, by same, 129 bls. rags.
Guaranty Trust Company, by same, 28 bls. rags.
Salomon Brothers & Co., Hansa, Hamburg, 29 bls. rags.
L. H. Abenheimer, Kofuku Maru, Hamburg, 122 bls. rags.
D. J. Murphy, Balsam, Belfast, 52 bls. rags.
Prince & Kennedy, Balsam, Dublin, 66 bls. bagging.
E. J. Keller Company, Inc., Veendam, Rotterdam, 128 bls. rags.
G. M. Graves & Co., Inc., by same, 103 bls. rags.
C. G. Keferstein, by same, 20 bls. rag pulp.
A. W. Fenton, Inc., by same, 128 bls. rags.
Second National Bank, Huronian, Hamburg, 75 bls. rags.
International Acceptance Bank, Stuttgart, Bremen, 127 bls. rags.
Brown Brothers & Co., by same, 140 bls. rags.
Goldman Sachs & Co., by same, 123 bls. rags.
D. M. Hicks, Inc., by same, 118 bls. rags.
Castle & Overton, Galileo, Hull, 71 bls. rags.
Equitable Trust Company, Galileo, Newcastle, 28 bls. paper stock.
Guaranty Trust Company, Caleo Espartel, Leghorn, 239 bls. rags.
Castle & Overton, Masaniello, Barcelona, 39 bls. rags.
Castle & Overton, Carlier, Antwerp, 197 bls. rags.
E. J. Keller Company, Inc., Eastern Victor, Rotterdam, 345 bls. rags.
P. Berlowitz, by same, 25 bls. rags.
D. M. Hicks, Inc., by same, 55 bls. rags.
Whaling Waste Products Company, by same, 146 bls. rags.
L. H. Abenheimer, by same, 380 bls. bagging.

OLD ROPE

Brown Brothers & Co., Veendam, Rotterdam, 77 coils.
L. H. Abenheimer, Huronian, Hamburg, 92 coils.
W. Schall & Co., Galileo, Newcastle, 75 coils.
Brown Brothers & Co., by same, 62 coils.
Brown Brothers & Co., Galileo, Hull, 430 coils.
Brown Brothers & Co., Hansa, Hamburg, 105 coils.
W. Schall & Co., Valfiorita, Barcelona, 73 coils.

WOOD PULP

E. M. Sergeant & Co., Hellig Olav, Gothenburg, 254 bls. wood pulp.
National City Bank, Hansa, Hamburg, 1,228 bls. wood pulp, 203 tons.

(*Continued on page 60*)

Imports and Exports of Paper and Paper Stock

(*Continued from page 59*)

Hartig Pulp Company, Eastern Victor, Rotterdam, 739 bls. wood pulp, 165 tons.
M. Gottesman & Co., Inc., Veendam, Rotterdam, 1,500 bls. wood pulp.
Scandinavian Pulp Agency, Inc., Fred VIII, Copenhagen, 127 bls. wood pulp.

CASEIN

Kalbfleisch Corporation, So. Cross, Buenos Aires, 1,667 bags.
T. M. Duche & Son, by same, 260 bags.

PHILADELPHIA IMPORTS

WEEK ENDING MAY 10, 1924

Republic Bag & Paper Company, Eastern Victor, Rotterdam, 1,057 bls. packing paper.
W. Brodie, by same, 500 bls. wood flour.
Castle & Overton, by same, 1,325 bls. rags.
E. J. Keller Company, Inc., by same, 80 bls. rags.
E. J. Keller Company, Inc., Luxpalite, Genoa, 83 bls. thread waste.
E. J. Keller Company, Inc., Caleo Espartel, Leghorn, 1,084 bls. rags.
E. J. Keller Company, Inc., F. Bulow, Hamburg, 262 bls. rags.
E. J. Keller Company, Inc., Alexandra, Copenhagen, 165 bls. rags.
E. J. Keller Company, Inc., Alexandra, Gothenburg, 67 bls. rags.
E. J. Keller Company, Inc., Anaconda, Antwerp, 89 bls. rags.
A. W. Fenton, Inc., London Exchange, London, 94 bls. rags.
Castle & Overton, Vincent, Havre, 46 bls. rags.
Castle & Overton, Manchester Shipper, Manchester, 286 bls. rags.
Castle & Overton, Anaconda, Antwerp, 44 bls. rags.
Katzenstein & Keene, Inc., Caleo Espartel, Leghorn, 45 bls. rags.
Katzenstein & Keene, Inc., F. Bulow, Hamburg, 50 bls. rags.
Katzenstein & Keene, Inc., Iowan, Kobe, 212 bls. rags.
M. Gottesman & Co., Inc., Gilda, Trieste, 4,346 bls. wood pulp.
Johaneson, Wales & Sparre, Inc., Alexandra, Copenhagen, 598 bls. sulphate pulp, 375 bls. sulphite pulp.

NEW ORLEANS IMPORTS

WEEK ENDING MAY 10, 1924

Castle & Overton, Freshwater, Havre, 305 bls. rags.
Castle & Overton, Tripp, Rotterdam, 481 bls. rags.

BOSTON IMPORTS

WEEK ENDING MAY 10, 1924

Traders Paper Company, Huronian, Hamburg, 717 rolls kraft paper.
Johaneson, Wales & Sparre, Inc., Alexandra, Copenhagen, 240 bls. sulphite pulp.
H. Hollesen, by same, 1,305 bls. wood pulp.
Katzenstein & Keene, Inc., by same, 146 bls. rags.
Katzenstein & Keene, Inc., F. Bulow, Alexandra, 300 bls. rags.
T. D. Downing & Co., Missouri, Antwerp, 325 bls. flax waste.
Second National Bank, by same, 716 bls. rags.
Castle & Overton, by same, 64 bls. rags.
Baring Brothers & Co., by same, 130 bls. flax waste.
American Exchange National Bank, by same, 86 bls. flax waste.
First National Bank of Boston, by same, 57 bls. flax waste.
J. Spaulding Sons Company, by same, 558 bls. flax waste.
Lee Higginson & Co., by same, 23 bls. thread waste.
Brown Brothers & Co., by same, 73 bls. old rope.
Brown Brothers & Co., by same, 34 coils old rope.

BALTIMORE IMPORTS

WEEK ENDING MAY 10, 1924

Castle & Overton, Sac City, Rotterdam, 254 bls. wood pulp.
Howell Donaldson, Inc., Nelda, Trieste, 1,339 bls. wood pulp.
E. J. Keller Company, Inc., F. Bulow, Hamburg, 65 bls. rag pulp.
Lagerloef Trading Company, Rockaway Park, 15,643 bls. chemical pulp.
Johaneson, Wales & Sparre, Inc., Furst Bulow, Hamburg, 12,000 bls. sulphite pulp.

Kalamazoo Valley Paper Firms Issue Bonds

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., May 12, 1924.—Two Kalamazoo Valley paper industries, the Hawthorne Paper Company of this city and the Wolverine Paper Company, of Otsego, are engaged in the sale of authorized bond issues, the funds so derived to pay for recent betterments, also to provide additional working capital.

The aggregate value of the two issues is $217,000 and constitute unsold portions of issues originally authorized several years ago. Olmsted & Mulhall are acting as fiscal agents in both sales campaigns.

In the case of the Hawthorne Paper Company, on June 6, 1917, an issue of bonds of $500,000 was authorized, $300,000 being sold at the time. Of the remaining $200,000, a portion amounting to $150,000 is now being offered at $96.50 and interest to yield about 6.40 per cent, as the bonds rate 6 per cent at par. They are due January 1, 1937.

The Hawthorne mill is in fine physical condition, many improvements having been made recently, which have resulted in increasing the production 25 per cent with practically no increase in cost of labor or general overhead.

The Hawthorne Paper Company's balance sheet as of December 31, 1923, after allowing for present financing, shows gross assets of $1,639,545.87, including notes and accounts receivable in excess of $93,000, inventories of $275,884.28 and land, buildings, machinery and equipment, $1,173,741.43. Liability items include bonded indebtedness of $450,000; capital stock, $500,000; surplus $575,366.09 and accounts payable, $102,848.65, with accruals and reserves of $11,361.13. Current assets are to liabilities on a basis of 3.43 to 1; fixed assets 2.6 to 1, while earnings are said to be three times the annual interest requirements on the bonds.

March 1, 1918, the Wolverine Paper Company authorized an issue of $200,000 first mortgage 6 per cent bonds, disposing of $133,000 at the time. The balance of this issue, due March 1, 1938, is now being sold at $96.50. The company's balance sheet as of December 31, 1923, provision being made for the present financing, shows total assets of $589,982.26, permanent assets counting for $417,272.16 of that amount. The outstanding capital is $150,000 and the surplus is $176,672.11. Current assets as to liabilities are on a basis of 2.55 to 1, fixed 2.1 to 1, while the earnings as to bond interest requirements are in excess of three to one.

Buy Control of Sloan Paper Co.

ATLANTA, Ga., May 12, 1924.—James L. Wells and some of his associates in the business have bought the interests of S. L. Sloan in the Sloan Paper Company. Mr. Sloan has gone into the mill end of the paper business, representing several mills in the South, selling to the jobbers.

The new officers of the company are: James L. Wells, president; W. C. Russell, vice-president, and J. A. Krouse, secretary and treasurer.

Mr. Wells bought a half interest in this business in January, 1923, after having been fifteen years with the Atlanta Division of the Whitaker Paper Company. The new change took effect May 1, 1924.

The Sloan Paper Company handles strictly advertised mill brands, selling to the printers, and has established a large trade in the Southeast, etc.

H. H. Fish, Jr., to Manage Great Western Paper Co.

Harry Ballou, general manager of the Great Western Paper Company, Ladysmith, Wis., has resigned and has been succeeded by H. H. Fish, Jr., who has been assistant general manager. Both parties have been with the company since its organization, 3½ years ago, when the property was purchased of the Menasha Paper Company, by the Western Newspaper Union of Omaha, Neb. Mr Fish, Jr., is the son of H. H. Fish, Sr., the president of the company. Mr. Ballou is to take a few months' rest and spend a part of the time in Colorado and California.

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Market Quotations

PAPER SECURITIES CLOSING PRICES TUESDAY

Reported by Stewart Tuttle & Co., Inc., 120 Broadway, New York

Stocks	BID	ASKED
Abitibi Power and Paper Company, Ltd.	56	57
Abitibi Power and Paper Company, Ltd, Pfd.	101	102
American Writing Paper Company, Pfd.	2⅛	2¼
Brompton Pulp and Paper Company, Ltd.	34¼	35
Donnacona Paper Company, Ltd.	45	50
Donnacona Paper Company, Ltd., Pfd.	98	100
International Paper Company	36½	37
International Paper Company, Pfd.	67	68
Laurentide Company, Ltd.	86¾	87
Price Brothers	44⅛	44¼
St. Maurice Paper Co., Ltd.	88	89
Smith (Howard) Paper Mills, Ltd.	56½	57
Spanish River Pulp and Paper Mills, Ltd.	100	101
Spanish River Pulp and Paper Mills, Pfd.	111	111¼
Union Bag and Paper Corp.	49	50
Wayagamack Pulp and Paper Company, Ltd.	36½	37
West Virginia Pulp and Paper Company	50	53

Bonds	BID	ASKED
Abitibi Power and Paper Company, Ltd., 1st 6s, 1934	99	101
Abitibi Power and Paper Company, Ltd., Gen. 6s 1940	92	95
Abitibi Power and Paper Company, Ltd., Con. 8s 1931	102½	103½
Belgo Canadian Paper Company, 1st 6s 1943	93½	94¼
Brown Company Serial 6s	97	98
Carthage Sulphite Pulp and Paper Company, 1st 8s 1941	35	50
Continental Paper and Bag Mills Corporation, 1st and Ref. 6½s, Series "A," 1944	91½	92¼
Donnacona Paper Company, Ltd., 1st 6s 1940	97	98½
Eddy Paper Company, 1st 7½s 1931	96½	98½
Gair (Robert) Company, 1st 7s 1937	94¼	95¼
International Paper Company, 1st and Ref. 5s (Series "B") 1947	83¼	84¼
Mattagami Pulp and Paper Company, 1st 6s 1937	58	60
Mattagami Pulp and Paper Company, 1st 7s 1949	20	25
Oswego Falls Corporation, 1st 8s 1942	100¾	101¾
Oxford Paper Company, 1st and Ref. 6s (Series "A") 1947	96	99
Parker, Young Company, 1st 6½s 1944	95½	97½
Paterson Parchment Paper Company, 1st 6s (Series "A") 1938	96	97½
Peshtigo Paper Company, 1st 7s (Series "B") 1942	92	94½
Price Bros. & Co., Ltd., 1st 6s (Series "A") 1943	96⅜	97⅛
Provincial Paper Mills, Ltd., 1st 6s 1940	98	100
Riordon Pulp and Paper Company, Ltd., Gen. 6s 1929	15	18
Riordon Pulp and Paper Company, Ltd., 6s 1942	71½	73
Riordon Company, Ltd., 1st and Ref. 8s 1940	67½	69
River Raisin Paper Company, 1st 8s 1936	103½	104½
Smith (Howard) Paper Mills, Ltd., 6s 1934	99¾	101
Smith (Howard) Paper Mills, Ltd., 1st Ref. 7s 1941	93½	95½
Spanish River Pulp and Paper Mills, Ltd., 1st 6s 1931	101	103
Spanish River Pulp and Paper Mills, Ltd., Gen. 8s 1941	102¾	103¾
Wayagamack Pulp and Paper Company, Ltd., 1st 6s 1951	74	77

Paper

F. o. b. Mill		
Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@30.00
Superfine	14.00	@30.00
Tub Sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—		
Rolls, contract	3.75	@ 4.00
Rolls, transit	3.75	@ 4.25
Sheets	4.25	@ 4.50
Side Runs	3.50	@ 4.15
Book, Cased—		
S. & S. C.	7.25	@ 9.00
M. F.	7.10	@ 8.85
Coated and Enamel	9.00	@14.00
Lithograph	9.00	@14.00
Tissues—		
White No. 1	.75	@ .76
White No. 2	.70	@ .80
Colored	1.05	@ 1.90
Anti-Tarnish	1.35	@ 1.90
Kraft	.85	@ 1.10
Manila	.75	@ .80
Kraft—		
No. 1 Domestic	5.75	@ 6.25
No. 2 Domestic	5.15	@ 5.75
Imported	4.75	@ 5.20
Manila—		
No. 1 Jute	7.50	@ 9.00
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	4.00	@ 4.50
Fibre Papers—		
No. 1 Fibre	5.50	@ 5.75
No. 2 Fibre	5.00	@ 5.25
Common Bogus	3.50	@ —
S. Screening	3.25	@ 3.75
Card Middles	4.00	@ 5.00

Boards—per ton—		
News	55.00	@60.00
Straw	61.00	@63.00
Chip	38.00	@45.00
Binders' Boards	70.00	@75.00
Sgl. Mla. Lt. Chip	65.00	@75.00
Wood Pulp	70.00	@75.00
Container	70.00	@80.00
Sulphate Screenings—		
Coarse	.80	@ .90
Refined	1.75	@ 2.00
Ground Wood—		
Screenings	20.00	@25.00
Glassine—		
Bleached, basis 25 lbs.	12.00	@15.00
Bleached, basis 20 lbs.	14.00	@17.00

Mechanical Pulp

(Ex-Dock)		
No. 1 Importer	35.00	@40.00
(F. o. b. Mill)		
No. 1 Domestic	27.50	@34.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)		
Sulphite (Imported)—		
Bleached	3.75	@ 4.50
Easy Bleaching	2.90	@ 3.10
No. 1 strong unbleached	2.60	@ 2.80
No. 2 strong unbleached	2.20	@ 2.40
No. 1 Kraft	2.50	@ 2.85
Sulphate—		
Bleached	3.50	@ 3.65
(F. o. b. Pulp Mill)		
Sulphite (Domestic)—		
Bleached	3.75	@ 4.50
Easy Bleaching Sulphite	2.50	@ 2.90
News Sulphite	2.40	@ 2.60
Mitscherlich	3.00	@ 3.50
Kraft (Domestic)	2.40	@ 3.55
Soda Bleached	3.90	@ 4.10

Domestic Rags

New Rags

Prices to Mill, f. o. b. N. Y.		
Shirt Cuttings—		
New White, No. 1	13.00	@13.50
New White, No. 2	6.25	@ 6.75
Silesias, No. 1	7.50	@ 8.00
New Unbleached	10.50	@11.00
Washables	5.50	@ 6.15
Fancy	6.50	@ 7.00
Blue Overall	8.00	@ 8.50
New Blue	5.50	@ 6.00
New Black Soft	4.65	@ 5.15
New Light Seconds	3.00	@ 3.25
O. D. Khaki Cuttings	4.75	@ 5.00
Men's Corduroy	4.00	@ 4.25
New Canvas	7.00	@ 7.50
New Black Mixed	2.75	@ 3.00

Old Rags

White, No. 1—		
Repacked	6.50	@ 7.00
Miscellaneous	5.50	@ 5.75
White, No. 2—		
Repacked	4.25	@ 4.50
Miscellaneous	3.75	@ 4.00
St. Soiled, White	2.80	@ 3.00
Thirds and Blues—		
Repacked	3.75	@ 4.00
Miscellaneous	3.00	@ 3.25
Black Stockings	3.75	@ 4.00
Roofing Rags—		
Cloth Strippings	2.20	@ 2.30
No. 1	2.20	@ 2.30
No. 2	2.10	@ 2.20
No. 3	1.20	@ 1.30
No. 4	1.20	@ 1.30
No. 5A	1.70	@ 1.80

Foreign Rags

New Light Silesias	7.50	@ 8.75
Light Flannelettes	8.00	@ 8.25
Unbl'chd Cottons	9.00	@ 9.50
New White Cuttings	11.50	@12.50
New Light Oxfords	7.75	@ 8.25
New Light Prints	7.25	@ 7.75
New Mixed Cuttings	3.25	@ 3.75
New Dark Cuttings	3.00	@ 3.50
No. 1 White Linens	9.00	@10.00
No. 2 White Linens	7.00	@ 8.00
No. 3 White Linens	6.00	@ 6.50
No. 4 White Linens	4.50	@ 5.50
Old Extra Light Prints	4.00	@ 4.50
Ord. Light Prints	3.00	@ 3.50
Med. Light Prints	2.40	@ 2.50
Dutch Blue Cottons	3.00	@ 4.00
Ger. Blue Cottons	3.00	@ 3.25
Ger. Blue Linens	3.50	@ 4.00
Checks and Blues	2.25	@ 2.50
Dark Cottons	2.00	@ 2.10
Shoppery	1.75	@ 1.85
French Blues	3.25	@ 3.75

Bagging

Prices to Mill F. o. b. N. Y.		
Gunny No. 1—		
Foreign	1.55	@ 1.65
Domestic	1.50	@ 1.60
Wool, Tares, light	1.40	@ 1.50
Wool, Tares, heavy	1.45	@ 1.55
Bright Bagging	1.15	@ 1.25
Sound Bagging	.90	@ 1.00
Manila Rope—		
Foreign	6.25	@ 6.50
Domestic	6.50	@ 6.75
New Bu. Cut	2.25	@ 2.50
Hessian Jute Threads—		
Foreign	2.25	@ 2.50
Domestic	2.00	@ 2.10

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, White, No. 1	3.40	@ 3.75
Hard, White, No. 2	2.90	@ 3.10
Soft, White, No. 1	2.65	@ 2.90
Flat Stock—		
Stitchless	1.35	@ 1.45
Over Issue Mag.	1.35	@ 1.45
Solid Flat Book	1.30	@ 1.40
Crumpled No. 1	1.00	@ 1.10
Solid Book Ledger	1.85	@ 1.45
Ledger Stock	1.45	@ 1.55
New B. B. Chips	.65	@ .75
Manilas—		
New Env. Cut	2.45	@ 2.55
New Cut. No. 1	1.75	@ 2.00
Extra No. 1 old	1.30	@ 1.40
Print	.85	@ .95
Container Board	.70	@ .80
Bogus Wrapper	.70	@ .80
Old Krafts Machine compressed bales	1.80	@ 1.90
News—		
No. 1 White News	1.70	@ 1.80
Strictly Overissue	.75	@ .85
Strictly Folded	.60	@ .70
No. 1 Mixed Paper	.45	@ .55
Common Paper	.35	@ .40

Twines

Cotton—(F. o. b. Mill)—		
No. 1	.43	@ .48
No. 2	.41	@ .43
No. 3	.40	@ .42
India, No. 6 basis—		
Light	.17	@ .18
Dark	.16	@ .17
B. C., 18 basis	.41	@ .42
A. B. Italian, 18 Basis	.51	@ .61
Finished Jute—		
Dark, 18 basis	.26	@ .28
Light, 18 basis	.28	@ .30
Jute Wrapping, 3-6 Ply—		
No. 1	.20	@ .23
No. 2	.18	@ .20
Tube Rope—		
4-ply and larger	.15	@ .17
Fine Tube Yarn—		
5-ply and larger	.20	@ .28
4-ply	.21	@ .24
3-ply	.22	@ .25
Unfinished India—		
Basis	.14	@ .15
Paper Makers' Twine		
Balls	.11	@ .13
Box Twine, 2-3 ply	.14	@ .15
Jute Rope	.15	@ .16
Amer. Hemp, 6	.30	@ .32
Sisal Hay Rope—		
No. 1 Basis	.14	@ .16
No. 2 Basis	.10	@ .12
Sisal Lath Yarn—		
No. 1	.14	@ .15
No. 2	.11	@ .13
Manila Rope	.18	@ .19

CHICAGO

[FROM OUR REGULAR CORRESPONDENT]

Paper

F. o. b. Mill			
All Rag Bond	35	@	40
No. 1 Rag Bond	25	@	35
No. 2 Rag Bond	14	@	25
Water Marked Sulphite	9	@	12
Sulphite Bond	7¾	@	10¾
Sulphite Ledger	9½	@	12
Superfine Writing	18	@	24
No. 1 Fine Writing	14	@	18
No. 2 Fine Writing	12	@	14
No. 3 Fine Writing	9	@	12
No. 1 M. F. Book	5¾	@	7½
No. 1 S. & S. Co. Book	6¼	@	7¾
Coated Book	8	@	10
Coated Label	8	@	10
News—Rolls, mill	3¾	@	4½
News—Sheets, mill	4	@	4¾
No. 1 Manila	4¾	@	5
No. 1 Fibre	4¾	@	5
No. 2 Manila	4½	@	4¾
Butchers' Manila	4¼	@	4½
No. 1 Kraft	6¼	@	6½
No. 2 Kraft	5¼	@	5¾
Wood Tag Boards	4½	@	6
Screenings	2¾	@	—

Boards, per ton—		
Plain Chip	40.00	@42.50
Solid news	42.50	@45.00
Manila Line Chip	50.00	@52.50
Container Lined—		
85 Test	60.00	@65.00
100 Test	65.00	@70.00

Old Papers

F. o. b. Chicago

Shavings—		
No. 1 Hard White	3.15	@ 3.25
White Envel. Cuttings	3.15	@ 3.25
No. 1 Soft Shav.	2.65	@ 2.75
No. 1 Mixed	1.25	@ 1.35
No. 2 Mixed	1.15	@ 1.25
Ledgers and Writings	1.55	@ 1.60
Solid Books	1.45	@ 1.50

No. 1 Books, Light	1.25	@	1.30
Blanks	2.20	@	2.25
Ex. No. 1 Manila	2.10	@	2.25
Manila Envelope Cuttings	2.45	@	2.50
No. 1 Manilas	.95	@	1.05
Folded News (over issue)	.85	@	.90
Old Newspapers—			
No. 1	.80	@	.85
No. 2	.65	@	.70
Mixed Papers—			
No. 1	.70	@	.75
No. 2	.50	@	.60
Straw Clippings	.80	@	—
Binders' Clippings	.80	@	—
Kraft	2.00	@	2.25
New Kraft Cuts	2.35	@	—
Roofing Stock, f. o. b. Chicago, Net Cash—			
No. 1	$33.00	@	—
No. 2	31.00	@	—
No. 3	29.00	@	—
No. 4	29.00	@	—

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT]

Paper

Bonds	.09½	@	.53
Ledgers	.15	@	.40
Writings—			
Superfine	.15	@	.20
Extra fine	.12	@	.22
Fine	.20	@	.30
Fine, No. 2	.20	@	.25
Fine, No. 3	.15	@	.20
Book, M. F.	.09¾	@	.12¾
Book, S. S. & C.	.11	@	.15
Book, Coated	.14¼	@	.20
Coated Lithograph.	.10	@	.15
Label	.10	@	.15
News	.05	@	.07
No. 1 Jute Manila	.12	@	.13
Manila Sul., No. 1	.08	@	.10
Manila No. 2	.07½	@	.08
No. 2 Kraft	—	@	.08½
No. 1 Kraft	—	@	.09½
Common Bogus	.03½	@	.04
Shaw Board	55.00	@	60.00
News Board	42.50	@	45.00
Chip Board	40.00	@	45.00
Wood Pulp Board.	2.75	@	3.00
(Carload Lots)			
Binder Boards—			
Per ton	70.00	@	75.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	61.00	@	63.00
Slaters	66.00	@	68.00
Best Tarred, 1-ply (per roll)	1.70	@	1.80
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply.	2.00	@	2.10

Bagging

F. o. b. Phila.

Gunny No. 1—			
Foreign	1.45	@	—
Domestic	1.50	@	—
Manila Rope	6.00	@	6.50
Sisal Rope	1.25	@	—
Mixed Rope	1.30	@	—
Scrap Burlaps	1.00	@	1.25
Wool Tares, heavy.	2.00	@	2.13
Mixed Strings	1.30	@	—
No. 1, New Lt. Burlap	2.00	@	—
New Burlap Cuttings	2.00	@	2.25

Old Papers

F. o. b. Phila.

Shavings—			
No. 1, Hard White	4.00	@	4.10
No. 2, Hard White	3.25	@	3.50
No. 1 Soft White	3.00	@	3.10
No. 2 Soft White	1.75	@	2.00
No. 1 Mixed	1.60	@	1.75
No. 2 Mixed	1.25	@	1.50
Solid Ledger Stock.	2.00	@	2.25
Writing Paper	2.00	@	—
No. 1 Books, heavy	1.80	@	1.90
No. 2 Books, light	1.40	@	1.50
No. 1 New Manila.	2.50	@	2.60
No. 1 Old Manila	1.75	@	2.00
Container Manila	1.20	@	1.25
Old Kraft	2.25	@	2.50
Overissue News	1.25	@	1.35
Old Newspaper	.75	@	.80
No. 1 Mixed Paper.	.70	@	.75
Common Paper	.50	@	.60
Straw Board, Chip.	.75	@	.80
Binders Bd., Chip	.75	@	.80

Domestic Rags—New.

Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.12½	@	.13½
New White, No. 2	.06	@	—
Silesias, No. 1	.08¼	@	.08½
New Unbleached.	.11	@	.11½
Washable	.05	@	.05½
Fancy	.06½	@	.06¾
Cottons—according to grades—			
Blue Overall	.08¾	@	.09
New Blue	.03¾	@	.04
New Black Soft.	.06	@	.06¼
New Light Seconds	.03½	@	.03¾
Khaki Cuttings	.05½	@	.06
Corduroy	.04	@	.04½
New Canvas	.10½	@	.11
New Black Mixed	.05¼	@	.05½

Old

White, No. 1—			
Repacked	5.75	@	6.00
Miscellaneous	.05	@	.05½
White, No. 2—			
Repacked	.04½	@	.04¾
Miscellaneous	.04¼	@	.04½
Thirds and Blues—			
Repacked	3.75	@	—
Miscellaneous	3.00	@	—
Black Stockings	4.00	@	4.50
Roofing Stock—			
No. 1	1.75	@	1.85
No. 2	1.65	@	1.75
No. 3	1.15	@	1.20
No. 4	1.25	@	1.35
No. 5A	1.40	@	—
B	1.25		nominal
C	1.15		nominal

BOSTON

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Bonds	.09	@	.63
Ledgers	.09	@	.55
Writings	.08½	@	.42
Superfine	.16	@	.26
Fine	.15	@	.18
Books, S. & S. C.	.07¼	@	.12
Books, M. F.	.07¼	@	.09½
Books, coated	.09	@	.15
Label	.09	@	.13
News, sheets	4.75	@	6.00
News, rolls	4.00	@	4.50
Manilas—			
No. 1 Manila	6.00	@	7.00
No. 1 Fiber	.06½	@	.07
No. 1 Jute	9.00	@	10.50
Kraft Wrapping	.07	@	—
Common Bogus	3.50	@	3.85

Boards

(Per Ton Destination)

Chip	42.50	@45.00
News, Vat Lined	44.00	@46.50
Wood, Vat Lined		@52.50
Filled News Board	45.00	@47.50
Solid News Board, No. 4 Finish	60.00	@ —
S. Manila Chip	58.50	@62.50
Pat. Coated News	75.00	@85.00

Old Papers

Mixed paper	.50	@	.55
Folded news	.62½	@	.65
Soft white shavings	2.60	@	2.75
Hard white shavings	3.50	@	3.75
Kraft Paper	1.90	@	2.00
Ledger and letter	2.15	@	2.35
No. 1 books and magazines	1.35	@	1.50
Manila paper No. 1.	1.70	@	1.75
Solid ledgers	2.50	@	2.75
No. 1 roofing rags.	1.75	@	1.85
No. 2 roofing rags	1.65	@	1.75
No. 3 gunny bagging	.75	@	.85
No. 4 Brussels and hard back carpets.	1.60	@	1.70
No. 5 roofing rags—			
A's	.90	@	1.00
B's	—	@	—
C's	—	@	—
No. 6 City dump rags	—	@	—
Manila rope, domestic	6	@	6½
Mixed strings	1.20	@	1.40
Jute strings	1.40	@	1.60

TORONTO

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.11	@	.12½
Light tinted	.12	@	.13½
Dark tinted	.13½	@	.15
Ledgers (sulphite).	—	@	.13
Writing	.09½	@	.12
News, f. o. b. Mills—			
Rolls (carloads)	3.75	@	—
Sheets (carloads)	—	@	4.50
Sheets (2 tons or over)	—	@	4.75
Book—			
No. 1 M. F. (carloads)	9.00	@	—
No. 2 M. F. (carloads)	8.00	@	—
No. 3 M. F. (carloads)	7.50	@	—
No. 1 S. C. (carloads)	9.50	@	—
No. 2 S. C. (carloads)	8.50	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Wrapping—			
Rag Brown	4.75	@	—
White Rap	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manila	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.15	@	—

Pulp

(F. o. b. Mill)

Ground wood	$30.00	@35.00
Sulphite easy bleaching	55.00	@60.00
Sulphite news grade	50.00	@55.00
Sulphite, bleached.	75.00	@77.00
Sulphite	60.00	@65.00

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut.	3.60	@	—
Soft White Book shavings	2.80	@	—
White Blk. News.	1.70	@	—
Book and Ledger—			
Flat Magazine and Book Stock(old)	1.35	@	—
Light and Crumpled Book Stock	1.20	@	—
Ledgers and Writings	1.68	@	—
Solid Ledgers	2.00	@	—
Manilas—			
New Manila Cut.	—	@	1.60
Printed Manilas	1.10	@	—
Kraft	2.05	@	—
News and Scrap—			
Strictly Overissue.	.80	@	—
Folded News	.80	@	—
No. 1 Mixed Papers	—	@	.40
Domestic Rags—			

Price to mills, f. o. b. Toronto

Per lb.

No. 1 White shirt cuttings	.13	@	.13¼
No. 2 White shirt cuttings	.06½	@	.07
Fancy shirt cuttings	.06¼	@	.06½
No. 1 Old Whites		@	
Third and blues	.04	@	.04½

Per cwt.

Black stockings	.03	@	—
Roofing stock:			
No. 1	—	@	—
No. 2	—	@	—
Manila rope	.06½	@	.06¾
No. 2	1.55	@	—

Pioneer Paper Co. Builds Unique Office

[FROM OUR REGULAR CORRESPONDENT.]

Los Angeles, Cal., May 8, 1924.—In the construction of its new $100,000 administration building, the Pioneer Paper Company of Los Angeles, manufacturers of roofing and building papers, has taken a new step in industrial designing. The building is to be of the Spanish Renaissance type. Although this beautiful and romantic form of architecture is in common vogue throughout the Southwest for residential structures, the Pioneer Paper Company has set the pace for its industrial adaptation, it believes. It is expected to soften the entire manufacturing tone of the Pioneer production unit, which is in the heart of the Los Angeles industrial district. The building will be 90 by 150 feet and will house executives, business office workers, sales and display rooms.

Chicago Laboratory Moves

The Chicago package and designing and testing laboratory, which has been maintained at 3344 S. Michigan avenue, for the past two years, has been moved to 739 S. Clark street. The new location is just outside the loop district near the association offices and is easily accessible. The laboratory is being equipped with up-to-date stitching machine and also an electrically driven sealing machine. In addition to the extensive tests recently made with containers packed with Strike-Anywhere matches, the laboratory has been quite active in the designing and testing of containers for various articles.

Robert P. Bagg Goes with Parsons Paper Co.

[FROM OUR REGULAR CORRESPONDENT.]

Holyoke, Mass., May 13, 1924.—Robert P. Bagg, the youngest son of Edward P. Bagg, head of the Parsons Paper Company, has taken a position with that Company and the Millers Falls Paper Company. Mr. Bagg has been in the advertising business for the past twelve years in New York City, the last four and a half years an executive with Barton, Durstine & Osborn.

New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, MAY 14, 1924

The past week has proved another uneventful week in the paper market and once more conditions have continued to defy the watchful waiters who are wondering how long the market can continue with its present lassitude. Spirited buying has not cropped out anywhere and trading, such as it is, is lukewarm and confined to such transactions as are dictated by the needs of the hour. Some of the paper men declare it as their belief that the spell which has been cast upon the market will be broken within the next week or ten days but they appear to base their expectations more on the supposition that the psychological moment must be near than on anything really tangible. Some argue that weather conditions thus far this month have not been a favorable influence for good business and that as soon as the sun dispells the gloom the change may be reflected in business conditions. Be that as it may the market the past week has been less satisfactory on the whole than it was the previous week. Such changes as are noted in prices denote a shrinking tendency. In most cases the change is slight but it is a barometer and shows which way the wind blows. There has been a slight falling off in demand in some lines and no mentionable gain in demand anywhere along the line. The greatest satisfaction to be derived from conditions at present is that a change must come soon and that in the general order of things that change must be for the better.

News print continues to hold the headline position as a feature. The demand keeps up very satisfactorily, refusing to be affected by the cautious buying experienced practically all along the line.

Fine papers have undergone no change in price and the demand, which has been none too satisfactory for some time, has slowed up a trifle.

Tissues remain the same in price and the demand continues to be confined to the limited buying which is necessary. Practically the same may be said of manilas and several other lines.

Mechanical Pulp

Mechanical pulp has been withstanding the tendency to higher prices and the quotations hang to the figures given last week. The demand is very satisfactory.

Chemical Pulp

The chemical pulp market is stiffening, No. 1 strong unbleached and other grades either showing a slight advance in price or indicating an upward tendency which may be expected to materialize within the next few days. The mills have been taking a new interest and the inquiries regarding future shipments have become more and more common. These inquiries are beginning to materialize into orders and the market is showing the natural response.

Old Rope and Bagging

Old rope and bagging continued firm during the past week, there being a good demand for both and no great amount of supplies available. The prices have in all items remained identical with those quoted a week ago.

Rags

There continues to be a good demand both for new and old rags in the higher grades but the demand for the lower grades of old rags is more or less spotty with a downward tendency at this time. The prices, however, have undergone no change since the quotations of a week ago.

Waste Paper

There is a very moderate demand in the waste paper market, a slight falling off having been registered during the week. The demand is very spotty to say the least and the buying is almost entirely confined to the hand to mouth variety although buyers are purchasing ahead in some of the grades. A general decline in the prices of the various items has been experienced since a week ago.

Twine

No changes have occurred in the twine market. Prices remain in an unsettled condition liable to change at a moment's notice and the chances favoring their going up rather than down. Orders are small and none too common.

National Paper Box Men to Meet

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, May 12, 1924.—The National Paper Box Manufacturers Association will hold its sixth annual convention at the New Ocean House, Swampscott, Mass., on May 26, 27, 28 and 29.

On the opening day of the convention the speakers will be Henry L. Stortz, chairman of the joint cost committee and George F. Barber, publicity secretary and marketing specialist for the National Association.

The second day will consist of the New England annual meeting and a special meeting of the southern division.

On the third day of the convention addresses will be made by H. O. Alderman of the National Association, Honorable Charles L. Underhill and John T. Robinson. On this day there will also be reports of the following chairmen of divisions: J. F. Ridenour, central division; M. C. Price, southern division; E. H. Rogers, eastern division; J. H. Cochrane, western division and F. C. Babcock, New England division.

The fourth day of the convention will consist of an address by Howard Coonley, president of the Boston Chamber of Commerce; William H. Shuart, president Glazed and Fancy Paper Manufacturers Association and Rev. Canon Allan P. Shatford, Episcopal Bishop of Montreal, "Making the Best of Present Conditions."

Surplus Machinery Exchange Organized

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., May 12, 1924.—The Surplus Machinery Exchange, capital $10,000, has been organized in Kalamazoo and is now located in the Grand Trunk Building, East Main street. The officers are: President, John Seltenreich; Vice-President, John R. Castleman; Secretary-Treasurer, E. L. Seltenreich. All stock has been subscribed.

This concern acts as a clearing house for all kinds of machinery, both buying and selling available equipment and handling a line of new and second hand machinery of all kinds. John Seltenreich, president and general manager, has had unusual success in interesting paper mill executive in his project, having closed contracts with nearly every large mill in this valley to handle equipment for them. The concern will pay cash as well as handle machinery on consignment.

The building leased has a total of 21,000 feet of floor space and is of heavy construction and able to carry a real load. Mr. Seltenreich says that within the next 30 days he will have repairs completed on the building and then expects to place 40 to 50 carloads of machinery in his warehouse and display room.

Ask Higher Duty on Papeteries

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., May 14, 1924.—A formal application has been filed with the Tariff Commission by the Fine Stationery Manufacturers' Association, in which the association asks the commission for increased tariff duties on papeteries for the full 50 per cent allowable under the law.

The duties on papeteries are contained in paragraphs 1307 and 1308 of the Tariff Law.

The present duty on paper is 3 cents per pound and 15 per cent ad valorem and on envelopes 5 per cent ad valorem.

The association asks a 50 per cent increase in the duties.

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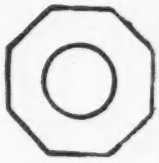

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Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, May 14, 1924.

Only those possessed of unusual vision are able to discern anything like encouraging conditions in the chemical market. These are days which test the optimistic for unsatisfactory conditions which have been glossed over on the ground that they were merely temporary are prolonging themselves in such a way as to discourage even those who are most inclined to look on the bright side. There is no really new phase to the market this week. Prices have remained about the same and there has been no great change in demand. The discouraging fact isn't in any material change but in the tendency, such slight change as has been noted throwing its weight against stability rather than enchancing it. Fulfilling the prediction of a week ago bleach showed a slight falling off in demand.

BLANC FIXE.—Little if any change has been registered in the demand for blanc fixe. There continues to be a very generous call for this commodity, the orders being sufficient to move the stock consistently. The price is still from $75 to $80 a ton.

BLEACHING POWDER.—The dropping off in the demand for bleach which had been looked up as inevitable began to materialize during the past week. The dropping off was not pronounced but it was of real significance and of sufficient importance to cause some of the dealers to feel it very materially. Those who buy are cutting their needs to the bone and their dealings are marked by a great caution. The price, however, is still holding at from 1.90 to 2.15 cents a pound.

CAUSTIC SODA.—The market as far as the alkalis are concerned remains firm. Caustic soda has suffered no letting up in demand and the price holds up. While the demand is not what it should be it is not losing ground but is holding on with tenacity. The price remains at from 3.10 to 3.15 cents a pound on a flat basis at the works.

CASEIN.—While the demand for casein remains very good, the price underwent a decrease the current week. It is quoted today at from 10½ to 11 cents a pound.

CHINA CLAY.—China Clay keeps to its forward course. There is a very satisfactory demand, orders arriving regularly and the dealers being kept reasonably busy with the contract business. There is the same keen competition in this commodity that has been remarked heretofore. The price is the same as was quoted last week which is from $16 to $20 a ton for the imported grades and from $12 to $15 a ton for the domestic grades.

CHLORINE.—The demand for chlorine continues normal and the price is still subject to considerable range, many small sales being reported at various high figures. The price is from 4.50 to 7.00 cents a pound in tanks.

ROSIN.—The new crop of rosin is beginning to reach the market and as a result some of the lower grades are easier. The price has not been materially influenced, however, the quotation at this writing being $5.80 per 280 pounds.

SALTCAKE.—Saltcake is another commodity which has remained unsusceptible to any change. There has been no change in price and the demand remains about the same. It is quoted at from $20 to $23 a ton.

SODA ASH.—Soda ash remains firm and the same may be said of it as has already been said regarding caustic soda. The demand is fairly satisfactory and the price is steady. The price is 1.38 cents a pound on a flat basis at the works.

SULPHATE OF ALUMINA.—The market demand for sulphate of alumina continues steady, with the prices remaining at the figures quoted last week. These are from 1.15 to 1.30 cents for the commercial grade and from 2.15 to 2.40 cents a pound for iron free.

SULPHUR.—The demand for sulphur is proving a constant drain on the market. The steady demand had, during the past week, an upward effect on the price which is now from $17 to $18 a ton.

TALC.—There is no let up in the very consistent demand for talc and the price holds up with the demand. The price is at from $16 to $17 a ton.

To Close Hoboken Paper Mill's Affairs

NEWARK, N. J., May 12, 1924.—Stockholders and creditors of the Hoboken Paper Mill Company have been directed to show cause before Judge Lynch in the Federal Court, May 19, why the report of the company's receivers should not be approved and allowances granted.

Judge Lynch granted the order yesterday upon the application of Wall, Height, Carey & Hartpence, of Jersey City, attorneys for the receivers, William C. Ridgway and Herman Ringel. The order directs all creditors, including the Second National Bank of Hoboken, trustee under a mortgage, to appear in court.

According to the receivers' report the company's income under their operation since October 24, 1922, was $546,878, the operating expenses and expense of liquidation amounted to $311,906, leaving a balance in cash and bonds of $234,972, of which $131,972 is in cash.

In the report the attorneys and receivers ask that allowances be granted for their service, administration expenses be allowed and the balance be used to pay off creditors' claims.

Bids Asked for Waste Paper

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., May 13.—The Government Printing Office will receive bids on June 2, for the purchase of waste paper, paper shavings, etc., which the printing office may accumulate during the fiscal year ending June 30, 1925.

Among the items on which bids will be received are 500,000 pounds of printed waste free from ground wood; 750,000 pounds of white shavings from book papers; 450,000 pounds of shavings from white and colored book paper, 75,000 pounds of shavings from blanks and blank books; 2,000 pounds of manila clippings; 175,000 pounds of cuttings from strawboard, pulpboard, etc.; 150,000 pounds of mutilated and discarded publications.

No Unfair Competition Say Stationers

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., May 14, 1924.—The National Association of Stationers and several State stationers' associations have filed answers with the Federal Trade Commission in connection with the Commission's complaint against the National association and others in docket No. 1,153.

The gist of all of the answers is that the National and the State organizations have not violated any laws against unfair methods of competition. The answers also deny that the Commission has any jurisdiction in these cases.

Container Association Meeting

Preparations are now being made for the next meeting of the National Container Association, to be held at the Drake Hotel, Chicago, on Tuesday, May 20, and Wednesday, May 21. This month marks the first anniversary of the association, which was organized at a meeting held at the Drake on May 22, 1923.

It is expected that a meeting of the executive committee, as well as the other committees, sales promotion, standardization and statistical, will be held at the association office, in the Transportation Building, on Monday, May 19, the day preceding the regular sessions at the Drake.

Saratoga County Paper Corp. Bankrupt

UTICA, N. Y., May 9, 1924.—An involuntary petition in bankruptcy was filed today against the Saratoga County Paper Corporation of Ballston Spa, which owes about $10,000.